STIC EIC 2100 Search Request Form

128072

86

Today's Date: 7/26/04

What date would you like to use to limit the search?

Priority Date: 12/28/01 Other:

Name Leslie Wong

AU 2177 Examiner # 78953

Room # 4041 Phone 5-3018

Serial # 10/028,934

Format for Search Results (Circle One):

PAPER DISK EMAIL

Where have you searched so far?

USP DWPI EPO JPO ACM IBM TDB

IEEE INSPEC SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) YES NO

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at http://ptoweb/patents/stic/stic-tc2100.htm.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

Topic: Design or model Turbine Engine

Novelty: (repository or Knowledge-based or warehouse or database) that store Templates/models for use to Design a Turbine Engine

STIC Searcher Geoffrey St-Leger Phone 308-7800

Date picked up 7/26/4 Date Completed 7/26/4

Search and Information Resources Administration

STIC Search Report
EIC 2100

STIC Database Tracking Number: 128072

TO: Leslie Wong **Location: 4D41** **Art Unit : 2177** **Monday, July 26, 2004** **Case Serial Number: 10/028934**	**From: Geoffrey St. Leger** **Location: EIC 2100** **PK2-4B30** **Phone: 308-7800** **geoffrey.stleger@uspto.gov**

Search Notes

Dear Examiner Wong,

Attached please find the results of your search request for application 10/028934. I searched Dialog's foreign patent files, technical databases, product announcement files and general files; along with the Internet.

Please let me know if you have any questions.

Regards,

Geoffrey St. Leger
4B30/308-7800

```
File   8:Ei Compendex(R) 1970-2004/Jul W3
         (c) 2004 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2004/May
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         (c) 2004 NTIS, Intl Cpyrght All Rights Res
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         (c) 2004 INIST/CNRS
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         (c) 1998 Inst for Sci Info
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         (c) 2004 FIZ TECHNIK
File 104:AeroBase 1999-2004/Jun
         (c) 2004 Contains copyrighted material

Set     Items   Description
S1      28264   TURBINE()ENGINE? ?
S2    8410748   TEMPLATE? ? OR MODEL? ? OR BLUEPRINT? ? OR DIAGRAM? ? OR D-
            RAWING? ?
S3    1053711   DATABASE? ? OR DATA()(BASE? ? OR WAREHOUSE? ?) OR REPOSITO-
            R??? OR (KNOWLEDGE OR INFORMATION)()MANAGEMENT OR ARCHIVE? ? -
            OR LIBRARY OR LIBRARIES
S4       2476   S1(5N)(DESIGN??? OR CREAT??? OR DEVELOP??? OR BUILD??? OR -
            CONSTRUCT??? OR PRODUC???? OR ASSEMBL???)
S5        873   S1(10N)S2
S6         31   S5 AND S3
S7         30   RD (unique items)
S8          5   S4 AND S7
S9          0   S1(7N)TEMPLATE? ?
S10         0   S1(10N)TEMPLATE? ?
S11       353   S1(10N)MODELS
S12        25   S7 NOT S8
S13        18   S11 AND S12
S14         7   S12 NOT S13
S15     73024   S2(10N)S3
S16         6   S4 AND S15
S17         6   RD (unique items)
S18         3   S17 NOT S7
S19       474   S4 AND S2
S20       116   S4(10N)S2
S21         5   S3 AND S20
S22         4   RD (unique items)
S23         0   S22 NOT (S7 OR S18)
S24      1878   S1(5N)(DESIGN??? OR CREAT??? OR DEVELOP???)
S25       387   S2 AND S24
S26       125   S5 AND S25
S27      1461   S1(5N)DESIGN???
S28        77   S5 AND S27
S29       542   S1(5N)MODEL? ?
S30        42   S27 AND S29
S31        35   RD (unique items)
S32        33   S31 NOT (S7 OR S18)
```

13/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

02970600 E.I. Monthly No: EIM9010-041955
Title: NO//x exhaust emissions for gas-fired turbine engines.
Author: Malte, P. C.; Bernstein, S.; Bahlmann, F.; Doelman, J.
Corporate Source: Energy Int Inc, Bellevue, WA, USA
Conference Title: International Gas Turbine and Aeroengine Congress and Exposition
Conference Location: Brussels, Belg Conference Date: 19900611
E.I. Conference No.: 13288
Source: American Society of Mechanical Engineers (Paper). Publ by American Soc of Mechanical Engineers (ASME), New York, NY, USA. GT392 11p
Publication Year: 1990
CODEN: ASMSA4 ISSN: 0402-1215
Language: English
Document Type: PA; (Conference Paper) Treatment: G; (General Review)
Journal Announcement: 9010
Abstract: A **database** consisting of 18 heavy-duty and aeroderivative gas **turbine engine models** , fired on natural gas, is evaluated for NO//x exhaust emissions with and without water and steam injection. CO exhaust emissions are also considered. Engine baseload power outputs range from 2.9 to 83.5 MW, compressor pressure ratios are from 7.2 to 30.0, and turbine inlet temperatures are from 1150 to 1515K. The engine models are from the late 1970s to the current period, and all use diffusion flame combustors. A correlation formula is developed, and discussed relative to formulas in the literature. NO//x control by water injection shows a fairly wide band; at a water-to-fuel mass ratio of 0.8, the NO//x reduction varies from 58 to 82 percent. (Edited author abstract) 14 Refs.
Descriptors: GAS TURBINES--*Exhaust Gases; **DATABASE** SYSTEMS; WATER TREATMENT--Chemicals Removal; NITROGEN OXIDES
Identifiers: GAS-FIRED TURBINE ENGINES; EXHAUST EMISSIONS; COMPRESSOR PRESSURE RATIOS
Classification Codes:
612 (Combustion Engines); 723 (Computer Software); 445 (Water Treatment)
61 (PLANT & POWER ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 44 (WATER & WATERWORKS ENGINEERING)

13/5/2 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS

2001376 NTIS Accession Number: DE97050725
Fossil Energy Program annual progress report for April 1995 through March 1996
Judkins, R. R.
Oak Ridge National Lab., TN.
Corp. Source Codes: 021310000; 4832000
Sponsor: Department of Energy, Washington, DC.
Report No.: ORNL-6902
Jun 96 282p
Languages: English
Journal Announcement: GRAI9713; ERA9723
Sponsored by Department of Energy, Washington, DC.
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NTIS Prices: PC A14/MF A03
Country of Publication: United States
Contract No.: AC05-96OR22464
This report covers progress for research and development projects that contribute to the advancement of various fossil energy technologies. Attention is focused on the following areas: materials research and development; environmental analysis support; bioprocessing research for

coal, oil, and natural gas; coal combustion research; fossil fuels supplies modeling and research; and advanced turbine systems. Selected papers are indexed separately for inclusion in the Energy Science and Technology **Database** .

Descriptors: Fossil Fuels; *Materials; Energy Supplies; Gas **Turbine Engines** ; Leading Abstract; Mathematical **Models** ; Progress Report; Research Programs; Resource Management; Technology Transfer

Identifiers: EDB/290500; EDB/294000; EDB/360000; NTISDE

Section Headings: 70E (Administration and Management--Research Program Administration and Technology Transfer); 71GE (Materials Sciences--General); 97B (Energy--Energy Use, Supply, and Demand); 97G (Energy--Policies, Regulations, and Studies); 97K (Energy--Fuels); 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines)

13/5/3 (Item 2 from file: 6)

DIALOG(R)File 6:NTIS

1942870 NTIS Accession Number: N96-18068/2

Laser Doppler Velocimeter Measurements and Laser Sheet Imaging in an Annular Combustor Model

(M.S. Thesis, Final Report)

Dwenger, R. D.

Purdue Univ., Lafayette, IN.

Corp. Source Codes: 009058000; P9391092

Sponsor: National Aeronautics and Space Administration, Washington, DC.

Report No.: NAS 1.26:191060; E-9866; NASA-CR-191060

1 Dec 95 285p

Languages: English

Journal Announcement: GRAI9611; STAR3405

Original Contains 12 Color Illustrations.

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A14/MF A03

Country of Publication: United States

Contract No.: NAS3-24350; RTOP 537-02-21

An experimental study was conducted in annular combustor model to provide a better understanding of the flowfield. Combustor model configurations consisting of primary jets only, annular jets only, and a combination of annular and primary jets were investigated. The purpose of this research was to provide a better understanding of combustor flows and to provide a **data base** for comparison with computational models. The first part of this research used a laser Doppler velocimeter to measure mean velocity and statistically calculate root-mean-square velocity in two coordinate directions. From this data, one Reynolds shear stress component and a two-dimensional turbulent kinetic energy term was determined. Major features of the flowfield included recirculating flow, primary and annular jet interaction, and high turbulence. The most pronounced result from this data was the effect the primary jets had on the flowfield. The primary jets were seen to reduce flow asymmetries, create larger recirculation zones, and higher turbulence levels. The second part of this research used a technique called marker nephelometry to provide mean concentration values in the combustor. Results showed the flow to be very turbulent and unsteady. All configurations investigated were highly sensitive to alignment of the primary and annular jets in the model and inlet conditions. Any imbalance between primary jets or misalignment of the annular jets caused severe flow asymmetries.

Descriptors: Annular flow; *Combustion chambers; *Combustion physics; *Gas flow; *Gas **turbine engines** ; *Imaging techniques; *Jet flow; *Mathematical **models** ; *Three dimensional flow; *Turbulent combustion; *Turbulent flow; Alignment; Asymmetry; Computational fluid dynamics; Flow distribution; Kinetic energy; Laser doppler velocimeters; Misalignment; Nephelometers; Reynolds stress; Three dimensional models

Identifiers: NTISNASA

Section Headings: 51A (Aeronautics and Aerodynamics--Aerodynamics); 46B

(Physics--Fluid Mechanics)

13/5/4 (Item 3 from file: 6)
DIALOG(R)File 6:NTIS

1758588 NTIS Accession Number: PB93-891794
Helicopter Engines. (Latest citations from the Aerospace Database **)**
(Published Search)
NERAC, Inc., Tolland, CT.
Corp. Source Codes: 103588000
Sponsor: National Technical Information Service, Springfield, VA.
Sep 93 250 citations
Languages: English Document Type: Bibliography
Journal Announcement: GRAI9323
Updated with each order. Supersedes PB88-860036. Prepared in cooperation with National Aeronautics and Space Administration, Washington, DC. Sponsored in part by National Technical Information Service, Springfield, VA.
U.S. sales only. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC N01/MF N01
Country of Publication: United States
The bibliography contains citations concerning the utilization of gas turbine engines as power plants for helicopters. Among the topics discussed are transmission testing and developing, microprocessor control for efficient engine operation, flight test results, and helicopter engine-airframe compatibility analyses. Specific **models** of helicopter gas **turbine engines** are included with reference to manufacturers, designs and performance tests. (Contains 250 citations and includes a subject term index and title list.)
Descriptors: *Bibliographies; *Helicopter engines; *Gas turbine engines; Electronic control; Propulsion; Helicopters
Identifiers: Published Searches; NTISPSIAA; NTISNERACD
Section Headings: 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines); 51C (Aeronautics and Aerodynamics--Aircraft); 88E (Library and Information Sciences--Reference Materials)

13/5/5 (Item 4 from file: 6)
DIALOG(R)File 6:NTIS

1486152 NTIS Accession Number: N90-13390/1
Constitutive Modeling for Isotropic Materials (HOST) (Annual Status Report No. 3)
Chan, K. S. ; Lindholm, U. S. ; Bodner, S. R. ; Hill, J. T. ; Weber, R. M.
Southwest Research Inst., San Antonio, TX.
Corp. Source Codes: 014411000; ST197060
Sponsor: National Aeronautics and Space Administration, Washington, DC.
Report No.: NAS 1.26:179522; SWRI-7576/45; NASA-CR-179522
Aug 86 129p
Languages: English
Journal Announcement: GRAI9008; STAR2805
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A07/MF A01
Country of Publication: United States
Contract No.: NAS3-23925; SWRI PROJ. 06-7576
The results of the third year of work on a program which is part of the NASA Hot Section Technology program (HOST) are presented. The goals of this program are: (1) the development of unified constitutive models for rate

dependent isotropic materials; and (2) the demonstration of the use of unified **models** in structural analyses of hot section components of gas **turbine engines** . The unified **models** selected for development and evaluation are those of Bodner-Partom and of Walker. A test procedure was developed for assisting the generation of a **data base** for the Bodner-Partom model using a relatively small number of specimens. This test procedure involved performing a tensile test at a temperature of interest that involves a succession of strain-rate changes. The results for B1900+Hf indicate that material constants related to hardening and thermal recovery can be obtained on the basis of such a procedure. Strain aging, thermal recovery, and unexpected material variations, however, preluded an accurate determination of the strain-rate sensitivity parameter is this exercise. The effects of casting grain size on the constitutive behavior of B1900+Hf were studied and no particular grain size effect was observed. A systematic procedure was also developed for determining the material constants in the Bodner-Partom model. Both the new test procedure and the method for determining material constants were applied to the alternate material, Mar-M247 . Test data including tensile, creep, cyclic and nonproportional biaxial (tension/torsion) loading were collected. Good correlations were obtained between the Bodner-Partom model and experiments. A literature survey was conducted to assess the effects of thermal history on the constitutive behavior of metals. Thermal history effects are expected to be present at temperature regimes where strain aging and change of microstructure are important. Possible modifications to the Bodner-Partom model to account for these effects are outlined. The use of a unified constitutive model for hot section component analyses was demonstrated by applying the Walker model and the MARC finite-element code to a B1900+Hf airfoil problem.

Descriptors: Cast alloys; *Constitutive equations; *Engine parts; *Gas **turbine engines** ; *Heat resistant alloys; *Nickel alloys; *Structural analysis; Mathematical **models** ; Tensile tests; Creep properties; Grain size; Isotropy; Microstructure; Precipitation hardening; Strain rate; Temperature effects

Identifiers: NTISNASA

Section Headings: 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines); 71N (Materials Sciences--Nonferrous Metals and Alloys); 46E (Physics--Structural Mechanics)

13/5/6 (Item 5 from file: 6)

1432265 NTIS Accession Number: N89-17315/7

Turbine Airfoil Film Cooling

Hylton, L. D. ; Nirmalan, V. ; Sultanian, B. K. ; Kaufman, R. M.
General Motors Corp., Indianapolis, IN.
Corp. Source Codes: 011143000; GO073666

Sponsor: National Aeronautics and Space Administration, Washington, DC.
Oct 87 14p
Languages: English
Journal Announcement: GRAI8912; STAR2709
In NASA, Lewis Research Center, Turbine Engine Hot Section Technology, 1987 p 225-238.
NTIS Prices: (Order as N89-17298/5, PC A20/MF A01)
Country of Publication: United States
Contract No.: NAS3-24619

The experimental data obtained in this program gives insight into the physical phenomena that occur on a film cooled airfoil, and should provide a relevant **data base** for verification of new design tools. Results indicate that the downstream film cooling process is a complex function of the thermal dilution and turbulence augmentation parameters with trends actually reversing as blowing strength and coolant-to-gas temperature ratio varied. The pressure surface of the airfoil is shown to exhibit a considerably higher degree of sensitivity to changes in the film cooling parameters and, consequently, should prove to be more of a challenge than the suction surface in accurately predicting heat transfer levels with downsteam film cooling.

Descriptors: Airfoils; *Film cooling; Gas **turbine engines** ; Heat transfer; Boundary layers; **Data bases** ; Mathematical **models** ; Predictions
Identifiers: NTISNASA
Section Headings: 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines); 51A (Aeronautics and Aerodynamics--Aerodynamics)

13/5/7 (Item 6 from file: 6)
DIALOG(R)File 6:NTIS

1432254 NTIS Accession Number: N89-17304/1
Aerothermal Modeling Program. Phase 2, Element B: Flow Interaction Experiment
Nikjooy, M. ; Mongia, H. C. ; Murthy, S. N. B. ; Sullivan, J. P.
General Motors Corp., Indianapolis, IN.
Corp. Source Codes: 011143000; GO073666
Sponsor: National Aeronautics and Space Administration, Washington, DC.
Oct 87 9p
Languages: English
Journal Announcement: GRAI8912; STAR2709
In NASA, Lewis Research Center, Turbine Engine Hot Section Technology, 1987 p 91-99 (See also N89-17303 and N89-17305).
NTIS Prices: (Order as N89-17298/5, PC A20/MF A01)
Country of Publication: United States
Contract No.: NAS3-24350
NASA has instituted an extensive effort to improve the design process and **data base** for the hot section components of gas turbine engines. The purpose of element B is to establish a benchmark quality data set that consists of measurements of the interaction of circular jets with swirling flow. Such flows are typical of those that occur in the primary zone of modern annular combustion liners. Extensive computations of the swirling flows are to be compared with the measurements for the purpose of assessing the accuracy of current physical models used to predict such flows.
Descriptors: Aerothermodynamics; *Gas **turbine engines** ; *Jet flow; *Swirling; *Turbulent flow; Accuracy; Engine parts; Linings; Mathematical **models** ; Predictions
Identifiers: NTISNASA
Section Headings: 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines); 46B (Physics--Fluid Mechanics)

14/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03672215 E.I. No: EIP93071035096
Title: Low cost P/M manufacture of titanium alloy components for fatigue critical applications
Author: Abkowitz, Stanley; Abkowitz, Susan M.; Weihrauch, Paul F.; Wells, Martin G.H.
Corporate Source: Dynamet Technology, Inc
Conference Title: Proceedings of the 3rd International Conference on Powder Metallurgy in Aerospace, Defense and Demanding Applications
Conference Location: San Diego, CA, USA Conference Date: 19930207-19930210
Sponsor: Metal Powder Industries Federation
E.I. Conference No.: 18742
Source: P/M in Aerospace, Defense and Demanding Applications - 1993 Proc 3 Int Conf Powder Metall Aerosp Def Demanding Appl 1993. Publ by Metal Powder Industries Federation, Princeton, NJ, USA. p 241-245
Publication Year: 1993
ISBN: 1-878954-31-8
Language: English
Document Type: CA; (Conference Article) Treatment: A; (Applications); G ; (General Review); T; (Theoretical)
Journal Announcement: 9309W2
Abstract: The technology of forming near-net shapes from blended elemental titanium P/M by the CHIP (Cold and Hot Isostatic Pressing) process has proven itself capable of providing fully dense components with static and dynamic mechanical properties equivalent to wrought product. However, there are restrictive cost-performance trade-offs which are largely controlled by the residual chloride content of the starting elemental titanium powder. This paper describes a study to establish a comprehensive and reliable **database** of the static and dynamic mechanical properties as related to chloride impurity level. This is accomplished by a designed experiment at various chloride levels and from this data, the development of a statistical model to predict these properties across all chloride levels. This model of properties along with corresponding material cost estimates will allow designers and planners to evaluate components for application of CHIP fabricated P/M titanium alloys. The **model** has been applied to a specific helicopter **turbine engine** bearing housing which was also the subject of manufacturing development studies aimed at producing near-net shape bearing housings and other engine related components. (Author abstract) 8 Refs.
Descriptors: *Titanium powder metallurgy; Titanium alloys; Components; Powder metal products; Manufacture; Cold working; Hot pressing; Chlorine compounds; Impurities; Composition effects
Identifiers: Cold and hot isostatic pressing (CHIP); Chloride impurity level
Classification Codes:
535.2.2 (Metal Forming Practice)
536.1 (Powder Metallurgy Operations); 542.3 (Titanium & Alloys); 601.2 (Machine Components); 536.3 (Powder Metal Products); 535.2 (Metal Forming); 804.2 (Inorganic Components)
536 (Powder Metallurgy); 542 (Light Metals & Alloys); 601 (Mechanical Design); 535 (Rolling, Forging & Forming); 804 (Chemical Products)
53 (METALLURGICAL ENGINEERING); 54 (METAL GROUPS); 60 (MECHANICAL ENGINEERING); 80 (CHEMICAL ENGINEERING)

14/5/2 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

02065810 E.I. Monthly No: EIM8601-003073
Title: LASER ANEMOMETER MEASUREMENTS OF THE FLOW FROM A SIMULATED FUEL NOZZLE.
Author: Zimmerman, D. R.
Corporate Source: GMC, Allison Gas Turbine Div, Indianapolis, IN, USA

Conference Title: International Symposium on Laser Anemometry. (Presented at the Winter Annual Meeting of the American Society of Mechanical Engineers.)
Conference Location: Miami Beach, FL, USA Conference Date: 19851117
Sponsor: ASME, Fluids Engineering Div, New York, NY, USA
E.I. Conference No.: 07183
Source: American Society of Mechanical Engineers, Fluids Engineering Division (Publication) FED v 33. Publ by ASME, New York, NY, USA p 13-18
Publication Year: 1985
CODEN: FEDSDL
Language: English
Document Type: PA; (Conference Paper)
Journal Announcement: 8601
Abstract: This paper concerns an experiment whose purpose is to acquire a **data base** for testing and modifying a computer simulation of gas turbine engine combustion. Two-color, two-dimensional, laser anemometer measurements were made of the axis-symmetric, swirling flow from a gas-**turbine - engine** , fuel-nozzle **model** . The flow field is characterized by two concentric, swirling, annular jets with an enclosed centerbody. The three mean velocity components, three normal stresses and two shear stresses were measured as a function of radial and axial location and Reynolds number for five geometrical configurations. The two most distinctly different geometries, co-rotating and counter-rotating annular jets, are discussed. (Edited author abstract)
Descriptors: *COMBUSTION--*Computer Simulation; ANEMOMETERS--Applications ; FLOW OF FLUIDS--Nozzles; GAS TURBINES--Fluid Dynamics
Identifiers: LASER ANEMOMETERS; VELOCITY PROFILES; FLOW OF FIELDS
Classification Codes:
521 (Combustion & Fuels); 723 (Computer Software); 631 (Fluid Flow & Hydrodynamics); 619 (Pipes, Tanks & Accessories); 612 (Combustion Engines)
52 (FUEL TECHNOLOGY); 72 (COMPUTERS & DATA PROCESSING); 63 (FLUID DYNAMICS & VACUUM TECHNOLOGY); 61 (PLANT & POWER ENGINEERING)

14/5/3 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

01188274 E.I. Monthly No: EI8206050050 E.I. Yearly No: EI82043373
Title: APPLICATION OF STRUCTURAL OPTIMIZATION TECHNIQUE TO REDUCE THE EXTERNAL VIBRATIONS OF A GAS-TURBINE ENGINE.
Author: Bedrossian, H.; Phoenix, R.
Corporate Source: Avco Lycoming Div, Stratford, Conn, USA
Source: ASME Pap 81-DET-143 for Meet Sep 20-23 1982 8 p
Publication Year: 1982
CODEN: ASMSA4 ISSN: 0402-1215
Language: ENGLISH
Journal Announcement: 8206
Abstract: The development of a structural and dynamics finite element **model** of a complete gas- **turbine engine** was achieved using the resources of the Integrated Turbine Analysis System, an in-house research program. This system employed interactive graphics and an engineering **database** to generate a NASTRAN dynamic model of the subject engine. A normal modes analysis identified the natural frequencies and associated model shapes for the engine structure within its operating range. 3 refs.
Descriptors: *GAS TURBINES--*Optimization; VIBRATIONS--Analysis
Classification Codes:
612 (Combustion Engines); 931 (Applied Physics)
61 (PLANT & POWER ENGINEERING); 93 (ENGINEERING PHYSICS)

14/5/4 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01881199 ORDER NO: AADAA-IMQ65856
The use of artificial neural networks for the prediction of pollutant

emissions from aeroengines
Author: Horne, Vincent Howard
Degree: M.Eng.
Year: 2000
Corporate Source/Institution: Royal Military College of Canada (Canada) (1103)
Adviser: Donald Gauthier
Source: VOLUME 40/05 of MASTERS ABSTRACTS.
PAGE 1291. 141 PAGES
Descriptors: ENGINEERING, MECHANICAL ; ARTIFICIAL INTELLIGENCE ; ENGINEERING, AEROSPACE
Descriptor Codes: 0548; 0800; 0775; 0538
ISBN: 0-612-65856-2

An off-the-shelf gas **turbine engine model** and a semi-empirical pollutant emissions **model** are combined to generate a **database** of engine operating parameters and pollutant emission rates. The **database** is representative of the measured outputs of a commercial turbofan engine operating over a typical range of flight conditions. Artificial Neural Networks are successfully trained to predict the emission rates of oxides of nitrogen (NOx) and carbon monoxide (CO) using commonly measured engine operating parameters. The number of data points available for training and the range of values in the training **database** are found to be of key importance. The advantages and limitations of using Artificial Neural Networks as Predictive Emission Monitoring Systems (PEMS) are discussed.

14/5/5 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS

1762179 NTIS Accession Number: PB93-894467
Mechanical Face Seals: Lubrication and Wear Resistance. (Latest citations from FLUIDEX (Fluid Engineering Abstracts) Database **)**
(Published Search)
NERAC, Inc., Tolland, CT.
Corp. Source Codes: 103588000
Sponsor: National Technical Information Service, Springfield, VA.
Oct 93 250 citations
Languages: English Document Type: Bibliography
Journal Announcement: GRAI9324
Updated with each order. Supersedes PB92-858265. Sponsored in part by National Technical Information Service, Springfield, VA.
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NTIS Prices: PC N01/MF N01
Country of Publication: United States
The bibliography contains citations concerning the design, development and applications of mechanical face seals relative to antifriction behavior, improved materials, lubricant effects, and accelerated **model** wear tests. Performance evaluations in mining, gas **turbine engines** , and pumps are included. (Contains 250 citations and includes a subject term index and title list.)
Descriptors: *Bibliographies; *Seals(Stoppers); *Lubrication; *Wear resistance; Packings(Seals)
Identifiers: *Mechanical face seals; Published Searches; NTISNTISU; NTISNERACD
Section Headings: 71B* (Materials Sciences--Adhesives and Sealants); 41F* (Manufacturing Technology--Joining); 71B (Materials Sciences--Adhesives and Sealants)

14/5/6 (Item 2 from file: 6)
DIALOG(R)File 6:NTIS

167I356 NTIS Accession Number: PB92-858265
Mechanical Face Seals: Lubrication and Wear Resistance. (Latest citations from FLUIDEX Database **)**
(Published Search)
NERAC, Inc., Tolland, CT.
Corp. Source Codes: 103588000
Sponsor: National Technical Information Service, Springfield, VA.
Aug 92 250 citations
Languages: English Document Type: Bibliography
Journal Announcement: GRAI9221
Updated with each order. Supersedes PB88-857818. Sponsored in part by National Technical Information Service, Springfield, VA.
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC N01/MF N01
Country of Publication: United States
The bibliography contains citations concerning the design, development and applications of mechanical face seals relative to antifriction behavior, improved materials, lubricant effects, and accelerated **model** wear tests. Performance evaluations in mining, gas **turbine engines**, and pumps are included. (Contains 250 citations and includes a subject term index and title list.)
Descriptors: *Bibliographies; *Seals(Stoppers); *Lubrication; *Wear resistance; Packings(Seals)
Identifiers: *Mechanical face seals; Published Searches; NTISNTISU; NTISNERACD
Section Headings: 71B* (Materials Sciences--Adhesives and Sealants); 41F* (Manufacturing Technology--Joining); 88E (Library and Information Sciences--Reference Materials)

14/5/7 (Item 3 from file: 6)
DIALOG(R)File 6:NTIS

0343877 NTIS Accession Number: AD-748 989/XAB
Measuring Technological Change: Aircraft Turbine Engines
Alexander, A. J. ; Nelson, J. R.
Rand Corp Santa Monica Calif
Corp. Source Codes: 296600
Report No.: R-1017-ARPA/PR
Jun 72 48p
Journal Announcement: GRAI7222
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A03/MF A01
Contract No.: DAHC15-67-C-0141; F44620-67-C-0045; ARPA ORDER-189
The report estimates turbine engine parameter tradeoffs over time, using multiple regression analysis. Movement of the parameter tradeoff curve is defined as technological advance. The **data base** includes the first **model** of a given **turbine engine** to pass the **model** qualification test. The history of **turbine engines** strongly suggests that single parameter analysis cannot capture the richness of the development process. The rate of technological advance seems fairly constant over time. However, two major manufacturers have been ahead of the others in the level of technology. Comparison of Soviet and American equations revealed an early Soviet lead, reversed since the 1950s.

32/5/3 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03954220 E.I. No: EIP94101417373
Title: Reduced order modelling of gas turbine engines
Author: Hill, D.C.
Corporate Source: Rolls-Royce Aerospace Group, Derby, Engl
Conference Title: Computing and Control Division Colloquium on Identification of Uncertain Systems
Conference Location: London, UK Conference Date: 19940426
Sponsor: Professional Group C8 (Control Systems Theory and Design)
E.I. Conference No.: 20828
Source: IEE Colloquium (Digest) n 105 Apr 26 1994. Publ by IEE, Michael Faraday House, Stevenage, Engl. p 4/1-4/3
Publication Year: 1994
CODEN: DCILDN ISSN: 0963-3308
Language: English
Document Type: CA; (Conference Article) Treatment: T; (Theoretical)
Journal Announcement: 9411W3
Abstract: Modelling has an important role in the development of new gas **turbine engines** . Dynamic **models** are required to **design** engine control laws and are used in real time to test the performance of the engine control system. This paper presents results of a series of experiments done on a Rolls Royce Spey turbofan engine and its comparison with calculated results using different time domain analysis techniques. Wideband input signals (pseudo-random binary sequences and multi-sine signals) are used and with time domain techniques allowing savings in test time, indications of model uncertainty are also shown.
Descriptors: *Gas turbines; Mathematical models; Control system synthesis ; Performance; Time domain analysis; Binary sequences; Electric machinery testing; Machine design; Parameter estimation; Algorithms
Identifiers: Gas **turbine engines** ; Dynamic **models** ; Engine testing; Uncertainty
Classification Codes:
612.3 (Gas Turbines & Engines); 921.6 (Numerical Methods); 731.1 (Control Systems); 721.1 (Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory)
612 (Combustion Engines); 921 (Applied Mathematics); 731 (Automatic Control Principles); 721 (Computer Circuits & Logic Elements); 601 (Mechanical Design)
61 (PLANT & POWER ENGINEERING); 92 (ENGINEERING MATHEMATICS); 73 (CONTROL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 60 (MECHANICAL ENGINEERING)

32/5/8 (Item 8 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

02161332 E.I. Monthly No: EI8701004170
Title: Automated Design **of Gas** Turbine Engines .
Title: AVTOMATIZIROVANNOE PROEKTIROVANIE GAZOTURBINNYKH DVIGATELEJ.
Author: Tunakov, A. P.
Source: Izvestiya Vysshikh Uchebnykh Zavedenii, Mashinostroenie n 12 1984 p 46-55
Publication Year: 1984
CODEN: IVUSAH ISSN: 0536-1044
Language: RUSSIAN
Document Type: JA; (Journal Article) Treatment: A; (Applications); G; (General Review)
Journal Announcement: 8701
Abstract: The main principles to be used in systems of computer aided **design** (CAD) of gas **turbine engines** are outlined. The main problems delaying the setting up of such systems in the USSR are pointed out. They are: lack of broad-range specialists, inadequate coordination between various organizations, few highly skilled operators capable of carrying on the design at a display device, poor quality of mathematical **models** of

gas **turbine engines** , lack of a generally agreed upon CAD system structure, few high-performance computers and peripherals, few programmers and engineers engaged in setting up CAD systems in various organizations and their training too slow. 6 refs. In Russian.

Descriptors: *GAS TURBINES--*Computer Aided Design; ENGINEERS--USSR; DISPLAY DEVICES--USSR; COMPUTERS--USSR; SYSTEMS ENGINEERING--USSR; ENGINEERING EDUCATION--USSR

Classification Codes:

612 (Combustion Engines); 901 (Engineering Profession); 723 (Computer Software); 731 (Automatic Control Principles); 912 (Industrial Engineering & Management)

61 (PLANT & POWER ENGINEERING); 90 (GENERAL ENGINEERING); 72 (COMPUTERS & DATA PROCESSING); 73 (CONTROL ENGINEERING); 91 (ENGINEERING MANAGEMENT)

32/5/12 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

1864856 NTIS Accession Number: DE95003198

Advanced Turbine Technology Applications Project (ATTAP) 1993 annual report

National Aeronautics and Space Administration, Cleveland, OH. Lewis Research Center.

Corp. Source Codes: 019039001; 4421000

Sponsor: Department of Energy, Washington, DC.

Report No.: DOE/NASA/0335-6

Jul 94 48p

Languages: English

Journal Announcement: GRAI9510; ERA9515

Sponsored by Department of Energy, Washington, DC.

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NTIS Prices: PC A03/MF A01

Country of Publication: United States

This report summarizes work performed by AlliedSignal Engines, a unit of AlliedSignal Aerospace Company, during calendar year 1993, toward development and demonstration of structural ceramic technology for automotive gas turbine engines. This work was performed for the U.S. Department of Energy (DOE) under National Aeronautics and Space Administration (NASA) Contract DEN3-335, Advanced Turbine Technology Applications Project (ATFAP). During 1993, the test bed used to demonstrate ceramic technology was changed from the AlliedSignal Engines/Garrett **Model** AGT101 regenerated gas **turbine engine** to the **Model** 331-200(CT) engine. The 331-200(CT) ceramic demonstrator is a fully-developed test platform based on the existing production AlliedSignal 331-200(ER) gas turbine auxiliary power unit (APU), and is well suited to evaluating ceramic turbine blades and nozzles. In addition, commonality of the 331-200(CT) engine with existing gas turbine APUs in commercial service provides the potential for field testing of ceramic components. The 1993 ATTAP activities emphasized design modifications of the 331-200 engine test bed to accommodate ceramic first-stage turbine nozzles and blades, fabrication of the ceramic components, ceramic component proof and rig tests, operational tests of the test bed equipped with the ceramic components, and refinement of critical ceramic design technologies.

Descriptors: Ceramics; *Gas **Turbine Engines** ; *Nozzles; Automobiles; **Design** ; Fabrication

Identifiers: EDB/330103; EDB/360603; NTISDE

Section Headings: 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines); 71D (Materials Sciences--Ceramics, Refractories, and Glass)

32/5/14 (Item 3 from file: 6)

DIALOG(R)File 6:NTIS

1809568 NTIS Accession Number: N94-28051/8
Engine Simulation Technology
Mclaughlin, P.
McLaughlin (Peter), Glastonbury, CT.
Corp. Source Codes: 108772000; MQ100329
c1993 14p
Languages: English
Journal Announcement: GRAI9416; STAR3207
In Vki, Gas Turbine Engine Transient Behaviour 14 p.
NTIS Prices: (Order as N94-28043/5, PC A11/MF A03)
Country of Publication: United States
A discussion of engine simulation technology which is intended to provide an overview of the continuous system simulation process as it has been applied in the gas turbine engine industry is presented. The topics include: devices employed in simulation, numerical and programming methods used; high level languages, applications toward which the simulation process is directed, organizational requirements, and future trends predicted by the current practice.
Descriptors: Computerized simulation; *Gas **turbine engines** ; Engine **design** ; Mathematical **models** ; Engine tests; Requirements; Simulators; Systems engineering
Identifiers: NTISNASAE
Section Headings: 51C (Aeronautics and Aerodynamics--Aircraft); 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines)

32/5/25 (Item 14 from file: 6)
DIALOG(R)File 6:NTIS

1084783 NTIS Accession Number: N84-12265/4
Aerothermal Modeling Program, Phase 1
inivasan, R. ; Reynolds, R. ; Ball, I. ; Berry, R. ; Johnson, K.
Garrett Turbine Engine Co., Phoenix, AZ.
Corp. Source Codes: 073002000; GA706891
Sponsor: National Aeronautics and Space Administration, Washington, DC.
Report No.: NAS 1.26:168243-V-2; GARRETT-21-4742-2; NASA-CR-168243-V-2
Aug 83 351p
Languages: English
Journal Announcement: GRAI8406; STAR2203
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A16/MF A01
Country of Publication: United States
Contract No.: NAS3-23523
The combustor performance submodels for complex flows are evaluated. The benchmark test cases for complex nonswirling flows are identified and analyzed. The introduction of swirl into the flow creates much faster mixing, caused by radial pressure gradients and increase in turbulence generation. These phenomena are more difficult to predict than the effects due to geometrical streamline curvatures, like the curved duct, and sudden expansion. Flow fields with swirl, both confined and unconfined are studied. The role of the dilution zone to achieve the turbine inlet radial profile plays an important part, therefore temperature field measurements were made in several idealized dilution zone configurations.
Descriptors: Aerothermochemistry; *Combustion chambers; *Engine **design** ; *Flow characteristics; *Gas **turbine engines** ; Dilution; Jet mixing flow; Mathematical **models** ; Swirling
Identifiers: NTISNASA
Section Headings: 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines); 81A (Combustion, Engines, and Propellants--Combustion and Ignition)

32/5/27 (Item 16 from file: 6)
DIALOG(R)File 6:NTIS

0993646 NTIS Accession Number: N82-33020/0
Automated Procedure for Developing Hybrid Computer Simulations of Turbofan Engines. Part 1: General Description
Szuch, J. R. ; Krosel, S. M. ; Bruton, W. M.
National Aeronautics and Space Administration, Cleveland, OH. Lewis Research Center.
Corp. Source Codes: 019039001; ND315753
Report No.: NAS 1.60:1851; E-779; NASA-TP-1851
Aug 82 120p
Languages: English
Journal Announcement: GRAI8303; STAR2023
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A06/MF A01
Country of Publication: United States
A systematic, computer-aided, self-documenting methodology for developing hybrid computer simulations of turbofan engines is presented. The methodology that is pesented makes use of a host program that can run on a large digital computer and a machine-dependent target (hybrid) program. The host program performs all the calculations and data manipulations that are needed to transform user-supplied engine design information to a form suitable for the hybrid computer. The host program also trims the self-contained engine model to match specified design-point information. Part I contains a general discussion of the methodology, describes a test case, and presents comparisons between hybrid simulation and specified engine performance data. Part II, a companion document, contains documentation, in the form of computer printouts, for the test case.
Descriptors: Computer aided design; *Computer programs; *Computerized simulation; *Engine **design** ; *Turbofan engines; Computer programming; Gas **turbine engines** ; Mathematical **models** ; Simulation
Identifiers: NTISNASA
Section Headings: 81D (Combustion, Engines, and Propellants--Jet and Gas Turbine Engines)

32/5/33 (Item 1 from file: 104)
DIALOG(R)File 104:AeroBase

0000122237
TITLE: Aircraft Engine Systems

AUTHORS:
Veres, Joseph P., NASA Glenn Research Center, United States, NASA, Cleveland, OH, United States

CORPORATE SOURCE:
NASA Glenn Research Center, United States, NASA, Cleveland, OH, United States

DOCUMENT TYPE: Conference Paper
JOURNAL/TITLE: 2002 Computing and Interdisciplinary Systems Office Review and Planning Meeting , 73-78 , August 2003
REPORT NO: NASA/TM-2003-211896
PUBL CONTROL NO: 20030068074
PUBLICATION DATE: August 2003

FINANCIAL SPONSOR:
NASA Glenn Research Center, United States, NASA, Cleveland, OH, United States

LANGUAGE: English

ABSTRACT LANGUAGE: English

IP DOCUMENT ID: 20030068085
PHYS DESCR: Original contains color illustrations
PAGE COUNT: 6

ABSTRACT:
The objective is to develop the capability to numerically **model** the performance of gas **turbine engines** used for aircraft propulsion. This capability will provide **turbine engine designers** with a means of accurately predicting the performance of new engines in a system environment prior to building and testing. The 'numerical test cell' developed under this project will reduce the number of component and engine tests required during development. As a result, the project will help to reduce the design cycle time and cost of gas turbine engines. This capability will be distributed to U.S. turbine engine manufacturers and air framers. This project focuses on goals of maintaining U.S. superiority in commercial gas turbine engine development for the aeronautics industry. (Derived from text)

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File 440:Current Contents Search(R) 1990-2004/Jul 26
         (c) 2004 Inst for Sci Info
File 587:Jane`s Defense&Aerospace 2004/Jul W2
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             OR LIBRARY OR LIBRARIES
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S12         1   S10 AND S11
S13      1654   S1(3N)(DESIGN??? OR CREAT??? OR DEVELOP??? OR BUILD??? OR -
             CONSTRUCT??? OR PRODUC???? OR ASSEMBL???)
S14        49   S7 AND S13
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S16        20   S15 AND S13
S17        21   S12 OR S16
S18        19   RD (unique items)
S19        16   S18 NOT S5
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5/3,K/1 (Item 1 from file: 36)
DIALOG(R)File 36:MetalBase
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0002806281 IP Accession No.: A89050298
Engineering ceramics: applications and testing requirements
Author: Butler, E.G.
Rolls Royce plc., Bristol, UK

Conference: Symposium on Mechanical Testing of Engineering Ceramics at High Temperatures, London, UK, April 1988
1988
International Journal of High Technology Ceramics, 93-102,
1988

ISSN: 0267-3762
Country of Publication: UK
Refs.: 6
Language: English

Abstract: The successful introduction of ceramic components into gas turbine engines requires a comprehensive mechanical property **database** to be established to enable the development of both 'zero-time' (athermal) and time-dependent behavioural models. The high stiffness, damage intolerant behaviour of ceramics...

Identifiers: engineering ceramics; applications; testing requirements; ceramic components; gas **turbine engines** ; comprehensive mechanical property **database** ; time-dependent behavioural **models** ; stiffness; damage intolerant behaviour; very high temperatures; test methods

5/3,K/2 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2004 The Gale Group. All rts. reserv.

05909497 SUPPLIER NUMBER: 78361024
A minimum bias Latin hypercube design.
PALMER, KURT; TSUI, KWOK-LEUNG
IIE Transactions, 33, 9, 793
Sept, 2001
ISSN: 0740-817X LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 11113 LINE COUNT: 00906

... and operation. Bernardo et al. (1989), Buck et al. (1989) and Yu et al. (1989) describe models of electronic circuits. Engelund et al. (1992) describe **models** of aircraft aerodynamics. Koch et al. (1996) describe **models** of **turbine engine** performance. Moran and Grossmann (1985) describe **models** of an ammonia production plant. These mathematical models tend to be mechanistic; i.e., their form describes the physical nature of the process. As a...have we identified plans for three or more input variables that have 20 simulator runs. It is our intention, in the future, to compile a **library** of MBLHD's that will be made available via the world wide web.
4. Model independent comparisons
In this section, we investigate the space-filling...

5/3,K/3 (Item 2 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
(c) 2004 The Gale Group. All rts. reserv.

04018871 SUPPLIER NUMBER: 18604349
ArchiCAD advances: smarter drafting tools and database **links strengthen Graphisoft's flagship software.**
Sullivan, Ann C.
Architecture, v85, n7, p131(3)
July, 1996

ISSN: 0746-0554 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1389 LINE COUNT: 00119

ArchiCAD advances: smarter drafting tools and database **links strengthen Graphisoft's flagship software.**

TEXT:
...Architects are drawn to its ArchiCAD software for its advanced three-dimensional modeling and rendering features, supported by strong construction documentation capabilities. ArchiCAD can't **model** a **turbine engine** , but architect David Marlatt, president of Graphisoft U.S., sees that as an advantage. While other companies try to satisfy several disciplines with the same...
... ships this month, offers not only virtual reality software, but improved construction documentation and facility management functions as well. Smarter drafting tools and more sophisticated **database** links enable architects to edit in section or elevation while automatically revising floor plans and three-dimensional models. The updated ArchiCAD also lets architects reference multiple object **libraries** and define and calculate an object's parametric properties more precisely.
Moreover, ArchiCAD 5.0 is available for Macintosh OS, Windows 95, and Windows NT...

...example, omitting partition walls or furniture. With a new zone tool, rooms and elements within rooms can be categorized for facility management tabulations.
Multiple object **libraries** can be referenced simultaneously - locally, across a network, or over the Internet. And third-party **databases** such as Cumulus, a pictorial compilation by Canto Software, are also supported by 5.0.
To entice more firms to try ArchiCAD without investing a...

5/3,K/4 (Item 1 from file: 103)
DIALOG(R)File 103:Energy SciTec

03547534 EDB-93-126412
Title: Low cost P/M manufacture of titanium alloy components for fatigue critical applications
Author(s): Abkowitz, S.; Abkowitz, S.M.; Weihrauch, P.F.; Wells, M.G.H. (Dynamet Technology, Inc., Burlington, MA (United States) Research Lab., Watertown, MA (United States))
Title: P/M in aerospace, defense and demanding applications - 1993; Proceedings of the 3rd International Conference, San Diego, CA, Feb. 7-10,
Author(s)/Editor(s): Froes, F.H.
Conference Title: Powder metallurgy in aerospace, defense, and demanding applications
Conference Location: San Diego, CA (United States) Conference Date: 8-11 Feb 1993
Publisher: Princeton, NJ (United States) Metal Powder Industries Federation
Publication Date: 1993
p 241-250 (402 p)
Report Number(s): CONF-9302111--
Language: English
...Abstract: offs are largely controlled by residual chloride content of the starting elemental titanium powder. This paper describes a study to establish a comprehensive and reliable **data base** of the static and dynamic mechanical properties as related to chloride impurity level. This is accomplished by a designed experiment at various chloride levels. From...

...properties along with corresponding material cost estimates will allow designers and planners to evaluate components for application of CHIP fabricated P/M titanium alloys. The **model** has been applied to a specific helicopter **turbine engine** bearing housing. 8 refs.

5/3,K/5 (Item 2 from file: 103)
DIALOG(R)File 103:Energy SciTec

03395283 GRA-92-93001; EDB-92-158040
Title: Mechanical face seals: Lubrication and wear resistance. (Latest citations from FLUIDEX data base **). Published Search**
Corporate Source: NERAC, Inc., Tolland, CT (United States)
Publication Date: Aug 1992
(vp.)
Report Number(s): PB-92-858265/XAB
Language: In English

Title: Mechanical face seals: Lubrication and wear resistance. (Latest citations from FLUIDEX data base **). Published Search**
Abstract: The bibliography contains citations concerning the design, development and applications of mechanical face seals relative to antifriction behavior, improved materials, lubricant effects, and accelerated **model** wear tests. Performance evaluations in mining, gas **turbine engines** , and pumps are included. (Contains 250 citations and includes a subject term index and title list.)

5/3,K/6 (Item 3 from file: 103)
DIALOG(R)File 103:Energy SciTec

02397505 EDB-89-034602
Title: Coolant passage heat transfer with rotation
Author(s): Hajek, T.J.; Wagner, J.; Johnson, B.V.
Title: Turbine engine hot section technology 1986
Corporate Source: National Aeronautics and Space Administration, Cleveland, OH (USA). Lewis Research Center
Conference Title: 5. annual workshop on turbine engine hot section technology
Conference Location: Cleveland, OH (United States) Conference Date: 21-22 Oct 1986
Publication Date: Oct 1986
(193-206 p)
Report Number(s): N-89-12876 NASA-CP--2444; E--3205; NAS--1.55:2444; CONF-8610163--
Language: In English

...Abstract: to predict local heat loads and the corresponding heat transfer coefficients. The objective of this program is to develop a heat transfer and pressure drop **data base** , computational fluid dynamic techniques and correlations for multi-pass rotating coolant passages with and without flow turbulators. The experimental effort is focused on the simulation of configurations and conditions expected in the blades of advanced aircraft high pressure turbines. With the use of this **data base** , the effects of Coriolis and buoyancy forces on the coolant side flow can be included in the design of turbine blades.
...Major Descriptors: GAS **TURBINE ENGINES** -- MATHEMATICAL **MODELS** ; *

5/3,K/7 (Item 4 from file: 103)
DIALOG(R)File 103:Energy SciTec

02085140 EDB-88-027862
Title: Constitutive modeling for isotropic materials
Author(s): Ramaswamy, V.G.; Vanstone, R.H.; Dame, L.T.; Laflen, J.H.
Title: Turbine engine hot section technology, 1985
Corporate Source: National Aeronautics and Space Administration, Cleveland, OH (USA). Lewis Research Center
Conference Title: Turbine engine hot section technology

Conference Location: Cleveland, OH, USA Conference Date: 22 Oct 1985
Publication Date: Oct 1985
p vp
Report Number(s): N-88-11140; NASA-CP-2405; E-2727; NAS-1.55:2405; CONF-8510485-
Language: English

Abstract: Constitutive theories were evaluated against a large uniaxial and multiaxial **data base** that was generated as part of this work. The experimental approach was to determine the constitutive behavior of Rene 80 under a multitude of conditions...
Major Descriptors: GAS **TURBINE ENGINES** -- MATHEMATICAL **MODELS** ; *

5/3,K/8 (Item 5 from file: 103)
DIALOG(R)File 103:Energy SciTec

01998146 ERA-12-039464; EDB-87-125818
Title: Combustion research in the Internal Fluid Mechanics Division
Author(s): Mularz, E.J.
Title: NASA-Chinese aeronautical establishment (CAE) symposium
Corporate Source: National Aeronautics and Space Administration, Cleveland, OH (USA). Lewis Research Center
Conference Title: NASA-Chinese aeronautical establishment (CAE) symposium
Conference Location: Cleveland, OH, USA Conference Date: 23 Sep 1985
Publication Date: 1986
p vp
Report Number(s): N-87-20267; NASA-CP-2433; E-3033; NAS-1.55:2433; CONF-8509404-
Language: English

...Abstract: so that physical models can be formulated to describe the processes that are occurring - for example, turbulence or chemical reaction. These experiments also form a **data base** for those who are doing code development by providing experimental data against which the codes can be verified and assesed. Models are generated as closure...
...Major Descriptors: GAS **TURBINE ENGINES** -- MATHEMATICAL **MODELS**

5/3,K/9 (Item 6 from file: 103)
DIALOG(R)File 103:Energy SciTec

01805904 ERA-11-041310; EDB-86-129772
Title: Scalar and momentum turbulent transport experiments with swirling and nonswirling flows
Author(s): Johnson, B.V.; Roback, R.; Bennett, J.C.; So, R.M.C.; Whitlaw, J.H.; Lapp, M.
Affiliation: United Technologies Research Center, East Hartford, CT
Connecticut Univ., Storrs
Title: Experimental measurements and techniques in turbulent reactive and non-reactive flows; Proceedings of the Winter Annual Meeting, New Orleans, LA, December 9-14, 1984
Conference Title: ASME winter annual meeting
Conference Location: New Orleans, LA, USA Conference Date: 9 Dec 1984
Publisher: ASME,New York, NY
Publication Date: 1984
p 107-119
Report Number(s): CONF-841201-
Language: English

...Abstract: and reactant distributions. Combined mass and momentum turbulent transport experiments with swirling and nonswirling flow have been conducted with the objective to obtain an experimental **data base** which can be used to evaluate and improve the turbulent transport submodesemployed in the aerothermal models. The present paper is mainly concerned with the overall...

...Major Descriptors: GAS **TURBINE** **ENGINES** -- MATHEMATICAL **MODELS** ; *

5/3,K/10 (Item 7 from file: 103)
DIALOG(R)File 103:Energy SciTec

01718550 EDB-86-042218
Author(s): Lindholm, U.S.; Chan, K.S.; Bodner, S.R.; Weber, R.M.; Walker, K.P.; Cassenti, B.N.
Title: Constitutive modeling for isotropic materials (HOST). Annual Status Report
Corporate Source: Southwest Research Inst., San Antonio, TX (USA)
Publication Date: Aug 1985
p 185
Report Number(s): N-86-10589
Language: English

...Abstract: to develop and validate unified constitutive models for isotropic materials, and (2) to demonstrate their usefulness for structural analyses of hot section components of gas **turbine** **engines** . The unified **models** selected for development and evaluation are that of Bodner-Partom and Walker. For model evaluation purposes, a large constitutive **data** **base** is generated for a B1900 + Hf alloy by performing uniaxial tensile, creep, cyclic, stress relation, and thermomechanical fatigue (TMF) tests as well as biaxial (tension...

...proportional and nonproportional loading over a wide range of strain rates and temperatures. Systematic approaches for evaluating material constants from a small subset of the **data** **base** are developed. Correlations of the uniaxial and biaxial tests data with the theories of Bodner-Partom and Walker are performed to establish the accuracy, range...

5/3,K/11 (Item 1 from file: 180)
DIALOG(R)File 180:Federal Register

DIALOG Accession Number: 02280960 Supplier Number: 930500318
Table of Contents
Volume: 58 Issue: 83 Page: 26225
CITATION NUMBER: 58 FR 26225
Date: MONDAY, MAY 3, 1993

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Part IX National **Archives** and Records Administration, Office of the Federal Register, 26449

Reader Aids Additional information, including a list of public laws, telephone numbers, and finding aids, appears...

5/3,K/12 (Item 2 from file: 180)
DIALOG(R)File 180:Federal Register
(c) 2004 format only The DIALOG Corp. All rts. reserv.

DIALOG Accession Number: 02118078 Supplier Number: 880501976
Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes
Volume: 53 Issue: 99 Page: 18530
CITATION NUMBER: 53 FR 18530
Date: MONDAY, MAY 23, 1988

TEXT:
... all turbofan or turbojet aircraft engines except engines of Class T3, T8, and TSS.

"Class T3" means all aircraft gas turbine engines of the JT3D **model** family.
"Class T8" means all aircraft gas **turbine engines** of the JT8D **model** family.
"Class TSS" means all aircraft gas **turbine engines** employed for propulsion of aircraft designed to operate at supersonic flight speeds.

"Commercial aircraft engine" means any aircraft engine used or intended for use by...
... of the equipment necessary to transport the emission sample and measure the level of emissions. This includes the sample system and the instrumentation system.

"Engine **model** " means all commercial aircraft **turbine engines** which are of the same general series, displacement, and design characteristics and are usually approved under the same type certificate.

"Exhaust emissions" means substances emitted... Office of the Chief Counsel, Rules Docket, Room 916, Federal Aviation Administration Headquarters Building, 800 Independence Avenue SW., Washington, DC;
(2) Department of Transportation, Branch **Library** , Room 930, Federal Aviation Administration Headquarters Building, 800 Independence Avenue SW., Washington, DC;
(3) The respective offices of the Federal Aviation Administration are as follows...

5/3,K/13 (Item 1 from file: 194)
DIALOG(R)File 194:FBODaily

3788040
JOINT TECHNOLOGY DEMONSTRATOR ENGINE (JTDE) PART 1 OF 1 SOL PRDA 98-01-PRK DUE 040698 POC
Pete Lahanas, AFRL/PRKB, Contract Negotiator, (937) 255-4818, Mark Dale, AFRL/PRTP, Project Engineer, (937) 255-2767 INTRODUCTION: "Joint Technology Demonstrator Engine (JTDE)". Part 1 of 2. The Propulsion Directorate, Turbine Engine Division (AFRL/PRT) and the Propulsion and Power Engineering (AIR 4.4T) are interested in receiving proposals for the research effort described below. Proposals in response to the PRDA must be received by 1500 hours Eastern time, 6 April 1998, addressed to: Propulsion Directorate, AFRL/PRTP, Attn: Mark R. Dale, Room D-205, Building 18D, Area B, 1950 Fifth Street, Wright-Patterson AFB, OH 45433-7251, with copies addressed to: Contracts, Code 2.5.4.3 Bldg. 588 Suite 2, Naval Air Warfare Center Aircraft Division, 47253 Whalen Road Unit 588, Patuxent River, MD 20670-1463, Attn: Ms. Beverly Abell. Proposal receipt after the date and time specified herein shall be treated in accordance with restrictions of FAR 52.215-1(c)(3). Proposals shall be submitted in accordance with this announcement. There will be no formal request for proposal or other solicitation request in regard to this requirement. Offerors shall be alert for any required PRDA amendments that may be published in the Commerce Business Daily. This PRDA may be amended to allow subsequent proposal submission dates. This is an unrestricted solicitation. Small businesses are encouraged to propose on all or any part of this solicitation. Potential offerors shall request the Supplemental Package to this PRDA. The Supplemental Package may be requested from Air Force Research Laboratory, Directorate of R&D Contracting by contacting the contract office POC listed above. The Supplemental Package contains the Security Classification Guide, Contract Security Classification Specification DD Form 254, sample Contract Work Breakdown Structure WL Form 66, Turbojet/Turbofan Engine Cycle Data, and Proposal Preparation Guidelines. The prerequisite for participation as a primary contractor in the JTDE program is the possession of an approved Advanced Turbopropulsion Plan applicable to meeting the Phase III engine goals identified by the Integrated High Performance Turbine Engine Technology (IHPTET) program. Offerors should request a copy of the Wright Laboratory guide entitled "PRDA and BAA Guide for Industry". This guide was specifically designed to assist offerors in understanding the PRDA/BAA process. Copies may be requested from Air Force Research Laboratory, R&D Contracting Office at the above address or on the Internet at http://www.wrs.afrl.af.mil/contract/prdag.htm. B-REQUIREMENTS: (1) Technical Description: The Integrated High Performance Turbine Engine Technology (IHPTET) program is a DOD, NASA, and Industry program focused on the development of revolutionary and innovative gas turbine engine technologies which offer an affordable approach to future system requirements. These technologies will permit a doubling of turbopropulsion capability while reducing engine cost over the baseline engine configuration established in the 1980s. To achieve this goal, Air Force Research Laboratory, Propulsion Directorate, Wright-Patterson AFB, OH, and the Naval Air Warfare Center Aircraft Division, Propulsion and Power Engineering, Patuxent River, MD integrate advanced technology components developed under Government Exploratory Development (6.2) efforts, contractor IR&D efforts, and other company sponsored programs into the Joint Technology Demonstrator Engine (JTDE) technology demonstrator program (6.3). The JTDE program provides the demonstration and verification required to transition, with acceptable risk, affordable, high payoff turbine engine component technologies for a wide variety of propulsion systems including the Joint Strike Fighter (JSF), the F-22 Air Superiority Fighter, the F/A-18 E/F and Unmanned Combat Aerial Vehicles (UCAV). The JTDE program conducts demonstrator engine testing to assess the **turbine engine** component technologies and validate performance, structural, and cost **models** /design systems. This effort includes design, fabrication, assembly, instrumentation, test and analysis to characterize the aerodynamic, thermodynamic, and mechanical performance of new and/or modified components. This effort includes updating the advanced technology cost **data base** , production and maintenance costs. Each offeror shall

include in their proposal their overall plan for meeting the IHPTET Phase III Thrust-to-Weight (Fn/Wt) and cost goals (in FY90 dollars) for turbojet/turbofan engines and identify what progress will be made in this effort. Each offeror shall also provide their Advanced Concepts plan defining post-Phase III goals through the year 2010. Rationale for the link between the contractor's Phase III plan and their Advanced Concepts plan should be clearly defined. The offeror's plan shall include a component development and an integrated JTDE plan addressing both technical and financial requirements. Risk reduction strategies such as teaming arrangements with other IHPTET contractors, component development plans, efforts used to enhance model validation, low-cost manufacturing processes, etc. are considered by the Government to be of extreme importance in the ability to meeting the IHPTET goals. These risk reduction strategies will be strongly considered in the evaluation. Plans for potential technology transition to major fighter weapon systems such as the Joint Strike Fighter, the F-22 Air Superiority Fighter, and the F/A-18 E/F are also considered extremely important. The desired technical effort should include a basic effort described below and may include options in achieving the JTDE Phase III goals. The basic effort shall consist of design, analysis, fabrication, assembly, test and post test assessment of a turbojet/turbofan engine commensurate with progress toward and/or fully meeting the IHPTET Phase III goals. The offeror must propose on the basic effort in order to propose an option program. Each offeror's base program should consist of: (a) Turbine Engine Design Definition, (b) Long Lead Time Material Procurement, (c) Component Design/Modification, (d) Fabrication/ Hardware Procurement, (e) Assembly and Instrumentation, (f) DemonstratorEngine Testing, (g) Post Test Assessment, (h) Configuration Definition/Long-Range Planning, (i) System Safety Analysis, (j) Technology Readiness Assessment for every advanced technology component, including MERQ (Material Properties, Environment, Reaction, Quality) Structural Evaluation, and (k) Logistics Support and System Life Cycle Cost Analysis addressing IHPTET engine production cost and an assessment of engine maintenance costs (in FY90 dollars). Optional tasks may include, but are not limited to, the following tasks: long-lead hardware fabrication and additional engine testing. The above tasks shall be subject to the following general requirements and constraints, where appropriate: (a) Each task shall be part of the offeror's existing or modified Government coordinated Advanced Turbopropulsion Plan (ATPP), (b) Government reviews shall be held at the end of the preliminary and final design tasks with Government approval required to proceed in each instance. At these reviews, the offeror shall review the status relative to each of the IHPTET Phase III goals. Reviews shall include the approach and methodology used to determine component (including major sub-assemblies) production costs. The IHPTET goals discussion should address bookkeeping required for instrumentation losses, material changes, and the methodology used to determine production cost and performance. Component discussions will include proposed structural and aerodynamic modeling techniques. (c) Proposed engine testing shall require Governmental approval of instrumentation and test plans prior to demonstration. (d) Methods in achieving engine performance and cost reduction goals shall be proposed by each offeror representative of progress toward IHPTET Phase III goals. (2) Deliverable Items: The following deliverable item shall be required: (a) Scientific and Technical Reports-Final Report DI-MISC-80711/T (ONE/R), (b) Contract Funds Status Report (CFSR) DI-MGMT-81468/T (QRTLY), (c) Scientific and Technical Reports- Contractor's Billing Voucher DI-MISC-80711/T (MTHLY), (d) Contract Work Breakdown Structure DI-MGMT-81334/T (ONE/R), (e) Cost/Schedule Status Report (C/SSR) DI-MGMT-81467/T (MTHLY), (f) Project Planning Chart DI-MGMT-80507A/T (QRTLY), (g) Status Report DI-MGMT-80368/T (QRTLY), (h) Conference Minutes DI-ADMN-81250A/T (ASREQ), (i) Presentation Material DI-ADMN-81373/T (ASREQ), (j) System Safety Hazard Analysis Report (SSHA) DI-SAFT-80101B/T (ONE/R), (k) Test/ Inspection Reports DI-NDTI-80809B/T (ASREQ), (l) Still Photographs DI-MISC-80169/T (ASREQ), (m) Technical Video Tape Presentation DI-MISC-81275/T (ASREQ), (n) Scientific and Technical Reports-Maintainability Status Report DI-MISC-80711/T (ASREQ), (p) Test Plan DI-NDTI-80566/T (ASREQ), (q) Scientific and Technical Reports-Detailed Research Plan DI-MISC-80711/T (ASREQ), (r) Subsystem Design Analysis Report DI-GDRQ-80567/T (ASREQ), and (s) Scientific and Technical Reports-Interim Technical Report DI-MISC-80711/T (ASREQ). (3) Security Requirements: The

security classification guidance forthis work will be the Security Classification Guide: Air Breathing Turbine Engine Aircraft and Missile Propulsion, dated 06 Jan 1997, and subsequent updates thereto. Access to and generation of classified data up to and including SECRET may be required to support this work effort. Any extracts or use of such data shall require the application of derivative classification and markings consistent with the source from which the extracts were made. Offerors must be capable of assembling, instrumenting, storing and testing classified demonstrator hardware as well as the generation and storage of classified data. Offerors responding to this PRDA shall include in any offer their assigned "Commercial and Government Entity Code," (i.e., Federal Supply code for Manufacturers -- a five digit code assigned by the Commander, Defense Logistics Service Center, At DLSC-CGC, Federal Center Battle Creek, MI 49016) (Reference DO 5000-12). (4) Public Law 98-94: Since public law 98-94 is applicable to this program, offerors must prepare a DD Form 2345, Export-controlled DoD Technical Data Agreement, and forward it to: Commander, Defense Logistics Service Center, Attn: DLSC-FBA, Federal Center, Battle Creek, MI 49017-3084 or provide evidence that registration with DLSC is already on file. C-ADDITIONAL INFORMATION: (1) Total Contract Period Anticipated: The total length of the technical effort for the base program is estimated to be 36 months (48 months w/options). The contractor shall also provide for an additional 4 months for processing/completion of the final report. (2) Expected Award Date: August 1998. (3) Government Estimate: Level of effort for the JTDE program is estimated at $78,139,000 ($98,139,000 w/options) for all awards with the following projected fiscal year funding profile: FY98 -- $200,000., FY99 -- $15,994,000., FY00 -- $30,405,000., FY01 -- $31,540,000., FY02 (Options) -- $20,000,000. (4) Type of Contract: Cost Plus Fixed Fee (completion). (5) Government Furnished Property: Category I petroleum products will be supplied as GFP, if it less expensive or otherwise in the best interest of the Government. Government-owned turbine engine hardware and components developed under existing previous contracts will be furnished, if available and if their use is necessary and practical for the performance of technical tasks under this effort. (6) Size Status: Size standard is 1000 employees (SIC 8731). Firms responding should indicate whether they are or are not a socially and economically disadvantaged business, whether or not they are a woman-owned business, and should also indicate their size status. (7) Notice to Foreign or Foreign-owned Firms: Foreign or foreign owned firms are asked to notify the Air Force point of contact cited in this PRDA upon deciding to respond to this announcement. Certain restrictions may apply which could preclude foreign or foreign-owned firms from participating as a prime in the JTDE program. (0049)
SPONSOR: R&D Contracting Directorate, Bldg 7, 2530 C Street, WPAFB, OH 45433-7607
PUBLICATION DATE: FEBRUARY 20, 1998
ISSUE: PSA-2036

... Air Superiority Fighter, the F/A-18 E/F and Unmanned Combat Aerial Vehicles (UCAV). The JTDE program conducts demonstrator engine testing to assess the **turbine engine** component technologies and validate performance, structural, and cost **models** /design systems. This effort includes design, fabrication, assembly, instrumentation, test and analysis to characterize the aerodynamic, thermodynamic, and mechanical performance of new and/or modified components. This effort includes updating the advanced technology cost **data base** , production and maintenance costs. Each offeror shall include in their proposal their overall plan for meeting the IHPTET Phase III Thrust-to-Weight (Fn/Wt...

5/3,K/14 (Item 2 from file: 194)
DIALOG(R)File 194:FBODaily

1009518
ENGINE EXHAUST EMISSION ANALYSIS OF GAS TURBINE ENGINE MODELS
and development of a software sys for an environmental/engine emmission **data base** to be compatible with the DEC VAX Operating System. The period of performance will be 18 mos. The complete scope of work required

to respond to the sol will be furnished as part of the sol. All responsible sources may submit a proposal which shall be considered by the Navy. The sol will require the submission of cost/price and technical proposals. The applicable Standard Industrial Classification No. is 7391. Req for copies of this sol should be received NLT 15 days from the date of publication of this synopsis in the CBD. Requests should be made by letter or telegram directed to NRCC, Code P72 (Telex 7106701990). The technical POC is Renee Brock at 215/897-5713. The proposed sol is expected to be issued approx 27 Jun 85 under sol N00140-85-R-3614. See Note 80. (159)

SPONSOR: Naval Regional Contracting Center, US Naval Base, Bldg. 600, Philadelphia, PA 19112
PUBLICATION DATE: JUNE 14, 1985

ENGINE EXHAUST EMISSION ANALYSIS OF GAS TURBINE ENGINE MODELS
and development of a software sys for an environmental/engine emmission **data base** to be compatible with the DEC VAX Operating System. The period of performance will be 18 mos. The complete scope of work required to respond...

5/3,K/15 (Item 1 from file: 587)
DIALOG(R)File 587:Jane`s Defense&Aerospace

00713866 Word Count:00661
LINK TEAMS WITH ENSTROM FOR HELICOPTER PILOT TRAINING WORK
OPERATION & MAINTENANCE INTELLIGENCE (OM) NOVEMBER 14, 1988 v.004 no. 009

...designated TH-28 -- would replace the UH-1 Hueys now used by the Army for initial entry pilot training.

A modified version on Enstrom's **Model** 280FX, the TH-28 incorporates a three-place cockpit, **turbine engine** , and a large, high-mass main roto
r
system which provides unusually low rates of descent combined with high kinetic energy for safe power-off landing...

...computer, revisions to navigational/communications systems, and updates of the APR-39A radar warning device.

Another 24 software enhancements will be made to the threat **library** . The AH-64 Combat Mission Simulator uses the ATACDIG (Army Tactical Digital Image Generation) visual system, which features quasi-intelligent, interactive hostile threats for realistic...

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File 275:Gale Group Computer DB(TM) 1983-2004/Jul 26
         (c) 2004 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Jul 26
         (c) 2004 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2004/Jul 26
         (c) 2004 The Gale Group
File  16:Gale Group PROMT(R) 1990-2004/Jul 26
         (c) 2004 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2004/Jul 26
         (c)2004 The Gale Group
File 624:McGraw-Hill Publications 1985-2004/Jul 23
         (c) 2004 McGraw-Hill Co. Inc
File  15:ABI/Inform(R) 1971-2004/Jul 24
         (c) 2004 ProQuest Info&Learning
File 647:CMP  Computer Fulltext 1988-2004/Jul W3
         (c) 2004 CMP Media, LLC
File 674:Computer News Fulltext 1989-2004/Jul W1
         (c) 2004 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2004/Jul 23
         (c) 2004 The Dialog Corp.
File 369:New Scientist 1994-2004/Jul W2
         (c) 2004 Reed Business Information Ltd.
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 610:Business Wire 1999-2004/Jul 24
         (c) 2004 Business Wire.
File 613:PR Newswire 1999-2004/Jul 24
         (c) 2004 PR Newswire Association Inc

Set     Items   Description
S1      14971   TURBINE()ENGINE? ?
S2    3433389   TEMPLATE? ? OR MODEL? ? OR BLUEPRINT? ? OR DIAGRAM? ? OR D-
            RAWING? ?
S3    3367248   DATABASE? ? OR DATA()(BASE? ? OR WAREHOUSE? ?) OR REPOSITO-
            R??? OR (KNOWLEDGE OR INFORMATION)()MANAGEMENT OR ARCHIVE? ? -
            OR LIBRARY OR LIBRARIES
S4       2313   S1(5N)(DESIGN??? OR CREAT??? OR DEVELOP??? OR BUILD??? OR -
            CONSTRUCT??? OR PRODUC???? OR ASSEMBL???)
S5          0   S1(10N)TEMPLATE? ?
S6          0   S3(10N)S2(10N)S1
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S8         15   RD (unique items)
S9         40   S1(7N)MODELS
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S14        11   RD (unique items)
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S16         2   S2(30N)S15
S17        60   S4(30N)S2
S18        48   RD (unique items)
S19        40   S18 NOT (S8 OR S11 OR S14 OR S16)
```

8/3,K/1 (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

03079886 Supplier Number: 81215620 (USE FORMAT 7 FOR FULLTEXT)
Data Systems & Solutions' Aircraft Asset Management Services Provide Return on Investment of Over 300%.
PR Newswire, pDCW01302012002
Jan 2, 2002
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 439

... Solutions offers engineering optimization, engine health monitoring, asset trending, and forecasting to the civil aviation industry and to military aviation.

The company has used these **data - based** asset management processes for gas **turbine engines** over the past two years and the study has now validated the business case for engine health monitoring and sophisticated asset maintenance forecasting **models** by calculating actual savings from actual maintenance events.

Data Systems & Solutions also provides various asset management services in the marine and energy sectors. The activities are focused on **turbine engine** health monitoring, maintenance and overhaul forecasting services, intelligent oil debris analysis, engine fault diagnosis, and engine configuration management with an emphasis on preventing engine problems...

8/3,K/2 (Item 2 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

01126183 Supplier Number: 40999849 (USE FORMAT 7 FOR FULLTEXT)
Vector provides a new engine for applications development
News Release, p1
Oct 31, 1989
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1099

... within certain views.

Vector makes use of the 68020/30 and the math coprocessor to the fullest providing fast operation on a full floating point **database** . The product provides a full mathematical **library** including trigonometric and Vector based functions. For example to define the midpoint between two XYZ positions A and B, one uses the following expression:

midpoint = (A+B)/2;

The program also includes the tools to quickly develop icons, **templates** , windows, strokes as well as pulldown and popup menus.

Vector includes unique tools such as the VectorSheet. The VectorSheet is similar to a spread sheet in that it allows for a user to view the mathematical formulae and their relationships with a **model** . Imagine, for example, a **turbine engine** . All of the dimensions and formulas are represented visually in the VectorSheet. The user can modify any specific value in the VectorSheet and the **model** will automatically update to show the results. This power is similar to the "Recalc" operation of a spreadsheet but acts instead on the actual **model** . Changes may also be updated in the VectorSheet based on changes made in the **model** .

Vector also provides complete support to import and export IGES, DXF, CDF, and SDF protocols making it very adaptable for working with AutoCAD users. For demanding tasks Vector **libraries** may be linked using the popular LightSpeed C' programming language.

Contact Vector Systems/MicroConcepts at Pyramid Airport Center, 3700 Vanguard Dr. Fort Wayne, IN, 46809...

8/3,K/3 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

05347606 Supplier Number: 90837380 (USE FORMAT 7 FOR FULLTEXT)
Technical highlights of materials solutions 'at a glance'. (ASM News).
Advanced Materials & Processes, v160, n8, p151(2)
August, 2002
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Academic
Word Count: 450

... world case histories
* The New Face of Forging: Net and Near Net Shape, covering processes, materials and properties, and modeling
* Joining and Repair of Gas **Turbine** **Engines** , covering new developments, repair, and life extension
* International Conference on Joining of Advanced and Specialty Materials V, focusing on processing control, joint characterization, joint performance...

...new engineering materials
* Machining and Grinding Engineered Materials, A Symposium Recognizing Dr. M. Eugene Merchant, FASM--topics include machining engineered metals, grinding engineered metals, predictive **models** for machining engineered materials, and machining non-metallic materials
* Materials Challenges and Solutions in the Automotive Industry, featuring recent research in the automotive sector and some unique solutions to automotive materials problems
* Developments in Web-Based Material Property **Databases** IV, the fourth in a series reviewing recent developments of electronically accessible material property databases and the activities of the ASM Materials Properties Database Committee...

8/3,K/4 (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

03626350 Supplier Number: 47809463 (USE FORMAT 7 FOR FULLTEXT)
BIBLIOGRAPHIES
High Tech Ceramics News, v9, n3, pN/A
July 1, 1997
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 187

... system components, combustion chamber parts, gas-path seals, turbine rotors, stators, nozzles, blades, and heat exchangers are discussed. Ceramic metal composites suitable for aircraft gas- **turbine** **engine** components are also considered.
Contains 50-250 citations and includes a subject-term index and title list Ei Compendex*Plus **Database** . Available from NTIS, Refer PB97-852917/ABS, Price Code: PC N01/MF/ N01; Tel: 703/487-4650, Fax: 703/321-8547.
CBN Tools, Abrasives
The...

...CBN) for machine tools and superhard abrasives. Included are methods of

producing CBN compacts and abrasive structures or cutting tools, tool inserts, grinding wheels, wire **drawing** dies, gears, and drill bits. Bonding methods on various substrates are also presented.

Contains 50-250 citations and includes a subject-term index and title ...

8/3,K/5 (Item 3 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

03066941 Supplier Number: 46268585 (USE FORMAT 7 FOR FULLTEXT)
Air Force MANTECH Programs Underway
Composites & Adhesives Newsletter, v12, n3, pN/A
April 1, 1996
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 314

... contract F33615-93-C-4334; McDonnell Douglas and Vought Aircraft; end date: August 1998.

* Product data exchange using STEP (Standard for the Exchange of Product **Model** Data) application protocol suite for composites (PAS-C) -- focused on aircraft and other industries (automotive, recreational) using composite structural components (cost savings); contract F33615-91-C-5713 to So. Carolina Research Authority; end date: October 1996.

* Titanium matrix composite **turbine engine** -- a three-phase program leading to testing of fullscale commercial engine components to establish **database** for production; contract F33615-94-2-4439 to the Titanium Metal Matrix **Turbine Engine** Component Consortium; end date: September 1999.

* Composite overwrapped pressure vessels (to optimize manufacturing processes); contract F33615-93-C-5308 to Lockheed Martin Corp.; end date...

8/3,K/6 (Item 4 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

01950540 Supplier Number: 43450777 (USE FORMAT 7 FOR FULLTEXT)
BELL HELICOPTER MAKES SALE IN JAPAN (NOV 12/1729 GMT)
Periscope Daily Defense News Capsules, pN/A
Nov 13, 1992
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 161

... Tokyo, Bell President Webb Joiner said the two choppers, scheduled for delivery in April 1993, will be turned over to Japan Maritime Safety Agency.

The **Model** 412HP is a medium twin-powered craft powered by Pratt & Whitney PT-6 **turbine engines** .

Joiner was in Tokyo for the 40th anniversary of Bell's affiliation with Mitsui, which is its licensee in Japan. During this time, Bell has...

...more than 1,200 helicopters for military and commercial use in Japan.

FOR MORE INFORMATION ON THE HELICOPTER MENTIONED ABOVE, GO TO THE USNI MILITARY **DATABASE** MENU, SELECT WEAPONS/SYSTEMS/PLATFORMS, AND AT THE PROMPTS, ENTER:

KEYWORD: 'UH-1N'

SEARCH: DEsignation

(Periscope Military **Database** provides detailed unclassified data on worldwide military equipment and organizations--call Nancy Becker, 301-816-8950, X-233)

8/3,K/7 (Item 1 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

06732676 Supplier Number: 56529978 (USE FORMAT 7 FOR FULLTEXT)
NEW PRODUCTS.
Pipeline & Gas Journal, v226, n9, p48
Sept, 1999
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1898

... its NetScanner, an intelligent multi-channel pressure acquisition system with Ethernet capability. The system is ideal for both liquid and dry gas pressure measurement for **turbine engine** research, turbomachinery test stands, process monitoring and other industrial applications. The PSI NetScanner product family includes a **Model** 98RK rack-mountable chassis, housing up to eight 16-channel **Model** 9816 intelligent pressure scanners that are networked via an Ethernet interface. The chassis provides scanner power supply and pneumatic connections, as well as 10Base T...

...Intelligent Digital Level Sensor is designed for custody transfer accuracy in demanding level measurement applications. When the LevelMaster is combined with the RTU, a wide **library** of data gathering and site automation applications are available. The TOTALFLOW LevelMaster has been widely deployed in oil and gas, water, wastewater, flood warning and...

8/3,K/8 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

06599847 Supplier Number: 55607572 (USE FORMAT 7 FOR FULLTEXT)
High-temperature superalloys seen improving.
FURRER, DAVID; LEMSKY, JOSEPH; NOEL, ROBERT
American Metal Market, v107, n163, p7A
August 24, 1999
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; Trade
Word Count: 1495

... its own. These IR&D programs have modeled and tested the material under a variety of manufacturing methods. This effort has resulted in an extensive **database** of process models, and Ladish can now predict how U-720 will behave under a variety of production scenarios.
As customers deepened their commitment to...

...these demands and is now being used in operating environments where temperatures are approaching 1,400 degrees F.
Ladish has developed an extensive material property **database** , built up over 13 years, for use in finite element modeling. The company routinely conducts forge and metal-flow **models** for U-720 for new part inquiries and new orders. This modeling capability enables Ladish to quickly select the optimal process. The company also conducts...

...methods from the solution heat-treat cyde. This approach also facilitates selection of the optimal process the first time, without numerous, costly shop floor tryouts.
Drawing upon powdered metal and process modeling capabilities, U-720 is likely to strengthen its popularity with aerospace design engineers in the future. Because of its responsiveness to continuous improvements, U-720 has earned a place in the gas **turbine engine** , particularly in high-pressure, turbine disc applications. Commonly designed into the first stage of the engine directly behind the combustor, these discs serve in the...

8/3,K/9 (Item 3 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

02429510 Supplier Number: 43200443
Precision Castparts - Company Report
Investext, p1-1
August 1, 1992
Language: English Record Type: Abstract
Document Type: Magazine/Journal; Trade

ABSTRACT:
...current poor economic environment -- in replenishing spares, and the increasing emphasis on just-in-time delivery on the part of PCP's principal customers, the **turbine engine** manufacturers. There will not be anything but a further decline in defense expenditures. Customers can only take just-in-time delivery so far, or the...

...commercial aircraft production will be halted (although this event may be a few years away). The company will be helped by the introduction of new **models** by Airbus in 1992 and 1993, since the engines used on those aircraft use more of the parts furnished by the company than do some **models** currently in service.
Tables in report: Stock Price, Earnings Data & Rating 1991-93; Quarterly Estimates 1992
The INVESTEXT **database** offers the full text of this report online (RN=1250876). To order printed copies, CALL (800)662-7878, (212)952-7060 US, (071)815-3800...

8/3,K/10 (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

01348605 Supplier Number: 41594772
Quanex Corp. - Company Report
Investext, p1-10
Oct 4, 1990
Language: English Record Type: Abstract
Document Type: Magazine/Journal; Trade

ABSTRACT:
...and down spouts. (4) Other, includes a small titanium business, Viking Metallurgical, which makes forgings and specialty mill products, such as suspension rings for gas **turbine engines** used in commercial aerospace; it accounts for less than 10% of Quanex's F1990 sales. Viking recently won a three-year, $30 million contract to supply gas **turbine engine** components to Rolls-Royce Plc.
Tables in report: Stock Price Data And Rating 1989-91; Capitalization 1990; Earnings **Model** By Segment 1981-91; Segment Analysis 1989-91
The INVESTEXT **database** offers the full text of this report online (RN=1034415). To order printed copies, CALL (800)662-7878, (617)345-2372 US, (071)836-8223...

8/3,K/11 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

06171890 SUPPLIER NUMBER: 12943276 (USE FORMAT 7 OR 9 FOR FULL TEXT)
GA and regional avionics directory. (general aviation) (Directory)
Warwick, Graham
Flight International, v142, n4345, p39(10)
Nov 18, 1992
DOCUMENT TYPE: Directory ISSN: 0015-3710 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT
WORD COUNT: 2192 LINE COUNT: 00744

... engine instrument and crew advisory

Model	Weight (kg)	system Remarks
CMA-2055	5.4	Flat-panel instrumentation displays. On MD900. Optional trend and vibration monitoring

Model	Weight (kg)	Remarks
Smart Scanner	0.45	Monitors piston-engine temperatures. 8ch
Ulimate Scanner	0.54	Programmable. 16ch for singles and twins

Model	Weight (kg)	Remarks
GEM 602/603	0.48	Graphic engine monitor. Displays piston-engine (603, turbocharged) temperatures

Model	Weight (kg)	Remarks
EDM 500/700	-	Displays piston-engine temperatures, monitors 120h trends/exceedances. 24ch or 54ch (twins)

Model	Weight (kg)	Remarks
On-Board Engine	0.91	Monitors piston-engine temperatures and Analyzer fuel flow. Three panel-size options

Model	Weight (kg)	Remarks
PAR 100A	2.35	Power Analyzer and Recorder. For **turbine engines** . Two engines per unit

Model	Weight (kg)	Remarks
EMIS	-	Engine Monitoring/Hyphens Instrument System. On Grob Egrett, Mooney M20L, Swearingen SJ30, Gemini ST

Model	Flight Plans	**Database**	Weight (kg)	Remarks
FMS 5000/ 7000/9000	150 (wpts)	Jeppesen NavData	2.5	LORAN and 5-, 6- or 12-channel GPS. Optional EFIS interface

Model	Flight Plans	**Database**	Weight (kg)	Remarks
KNS 660	400	Bendix/King	9.16	Uses VOR/DME. VLF/Omega, INS, GPS, LORAN and TACAN optional

Model	Flight Plans	**Database**	Weight (kg)	Remarks
LNS6000	100	Card	6.8	Panel-mounted 76.2mm instrument. VOR/DME with optional internal LORAN and GPS. Interfaces with Stormcope and CWS91 collision-warning system

Model	Flight Plans	**Database**	Weight (kg)	Remarks
CMA-900	1,000	Worldwide (updated)	6 -	Colour display. Optional built-in GPS or VLF/Omega

Model	Flight Plans	**Database**	Weight (kg)	Remarks
GNS-500A	127 (wpts)	Worldwide	17.7	Series 5. VLF/Omega with optional GPS
GNS-X	49	Worldwide	6.35	Standard VOR/DME/DME. Optional GPS, LORAN and VLF /Omega. Colour display, expanded **database** , AFIS datalink options
GNS-X/SC	-	Worldwide	-	Panel-mounted. Internal 6ch GPS, remote VLF/Omega, optional LORAN

GNS-X/
Color SC - Worldwide - As above, with...

8/3,K/12 (Item 1 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications

00757731
USAF, NASA PROGRAMS TO PUSH HYPERSONIC BOUNDARIES
Aviation Week & Space Technology May 6, 1996; Pg 22; Vol. 144, No. 19
Journal Code: AW ISSN: 0005-2175
Section Heading: HEADLINE NEWS
Dateline: COLORADO SPRINGS
Word Count: 1,700 *Full text available in Formats 5, 7 and 9*

BYLINE:
WILLIAM B. SCOTT

TEXT:
... Hyper-X aircraft at its own expense, using internal research and development money. The unmanned vehicle, equipped with landing gear and powered by a small **turbine engine** , will explore S&C issues during takeoff and landing and speeds up to about Mach 0.4.

Both Air Force and NASA efforts are **drawing** on technical data acquired under the now-defunct National Aero Space Plane (NASP) program, but are not considered follow-ons to it. NASA also is...

...SYNCON``--a high-Mach study that acquired limited experimental data--and a number of in-house Langley studies of air-breathing high-speed designs. These **data bases** are used as ``points of departure,'' Couch said.

8/3,K/13 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01504643 01-55631
Ceramics for turbine engines
Richerson, David W
Mechanical Engineering v119n9 PP: 80-83 Sep 1997
ISSN: 0025-6501 JRNL CODE: MEG
WORD COUNT: 3062

...TEXT: Tensile testing is also important to gain an understanding of creep, stress-rupture life (slow crack growth), and cyclic fatigue, as well as to establish **models** for life prediction.

Earlier efforts at material characterization and **database** generation have continued under a project funded by the U.S. Department of Energy (DOE) through Oak Ridge National Laboratory in Oak Ridge, Tenn. The project addresses test standardization, a **database** for fast fracture and time-dependent fracture measured in uniaxial tension, correlations with nondestructive-evaluation (NDE) techniques and life-prediction methods, and iterative increases in material and component reliability. Statistical tensile **databases** now ...room temperature to at least 1,370C, including some stress-rupture and creep tests lasting more than 10,000 hours. A parallel program at Garrett **Turbine Engine** Co. in Phoenixnow part of AlliedSignal-has established a flexuralstrength **database** on the same materials exposed for up to 3,500 hours in a dynamic test rig cycling between a diesel-fired burner and an air...

...designing ceramic components have advanced dramatically since the 1960s. The field of probabilistic design for ceramics has been developed and validated in engine testing. The **turbine - engine** companies have established refined **models** and codes for preliminary design, detailed design, and life prediction. The first probabilistic life-prediction codes were based only on fast-fracture criteria, but improved **databases** have

allowed time-dependent **models** to be incorporated in life-prediction codes.

ENGINE DEMONSTRATIONS

The first key program in the United States was the Brittle Material Design-High Temperature Turbine...

8/3,K/14 (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext

00512454 CMP ACCESSION NUMBER: IWK19920217S1921
HEARD
INFORMATIONWEEK, 1992, n 360, 8
PUBLICATION DATE: 920217
JOURNAL CODE: IWK LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: EXECUTIVE SUMMARY
WORD COUNT: 453

... canceled checks in an easy-to-read monthly statement in lieu of the canceled checks themselves. MANAGEMENT

David Hill, 65, executive-in-charge of corporate **information management** at General Motors, retired at the beginning of the month. A replacement for Hill, under whom GM launched a massive restructuring to accelerate corporate **information management** planning, will be named in about a month, according to Robert Hutchison, a GM information chief in charge of the company's material management systems. SUPER COMPUTING

Allison Gas Turbine, a unit of General Motors, is installing a massively parallel supercomputer to help it design and analyze aircraft **turbine engines** . The GM unit is taking orders for an nCube 2 **Model** 10-its first supercomputer purchase. "Basically, we bought our own supercomputer for price/performance reasons," says Robert A. Delaney, chief of advanced turbomachinery at Allison...

8/3,K/15 (Item 1 from file: 613)
DIALOG(R)File 613:PR Newswire

00695614 20020102DCW013 (USE FORMAT 7 FOR FULLTEXT)
Data Systems & Solutions' Aircraft Management Services
PR Newswire
Wednesday, January 2, 2002 10:30 EST
JOURNAL CODE: PR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 412

TEXT:
...Solutions offers engineering optimization, engine health monitoring, asset trending, and forecasting to the civil aviation industry and
to military aviation.

The company has used these **data - based** asset management processes for gas
turbine engines over the past two years and the study has now validated the
business case for engine health monitoring and sophisticated asset maintenance
forecasting **models** by calculating actual savings from actual maintenance events.

Data Systems & Solutions also provides various asset management services
in the marine and energy sectors. The activities are focused on **turbine engine** health monitoring, maintenance and overhaul forecasting services, intelligent oil debris analysis, engine fault diagnosis, and engine

19/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01461131 SUPPLIER NUMBER: 11577338 (USE FORMAT 7 OR 9 FOR FULL TEXT)
A plotter technology for every need: buyers face trade-offs in color, speed, reliability and print quality. (Buyers Guide)
LaPolla, Stephanie
PC Week, v8, n48, p105(2)
Dec 2, 1991
DOCUMENT TYPE: Buyers Guide ISSN: 0740-1604 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1048 LINE COUNT: 00084

... plotters because they are easier to maintain, buyers said.
Paul Chalker, a senior aerospace engineer at the Garrett Engine Division of Allied Signal Aerospace Co., **builders** of **turbine engines** in Phoenix, found productivity rose when the division switched from electrostatic plotters to direct imaging, he said.
The Garrett Engine Division is using seven CalComp Computer Graphics Group DrawingMaster Plus **Model** 52236 direct-imaging plotters on an Ethernet LAN.
Direct imaging "has reduced manpower," Chalker said. "It's easy to use, and there is no toxic...

19/3,K/2 (Item 1 from file: 621)
DIALOG(R)File 621:Gale Group New Prod.Annou.(R)

01184866 Supplier Number: 42744759 (USE FORMAT 7 FOR FULLTEXT)
nCUBE ANNOUNCES SUPERCOMPUTER SALE TO GENERAL MOTORS DIVISION
PR Newswire, p1
Feb 10, 1992
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 564

... of General Motors Corp. The nCUBE system,
selected by Allison Gas Turbine for its price/performance advantages and superior reliability, will be used in the **design** and analysis of aircraft **turbine engines** .

The 64-processor nCUBE 2 **Model** 10 will be installed at Allison Gas Turbine this month. Allison Gas Turbine will use a number of computational fluid dynamics (CFD) software applications on the nCUBE system to **design** and analyze sophisticated aircraft **turbine engine**
components. Some of the company's results will be contributed to the Air Force High Performance Turbine Engine Technology Initiative through Allison Gas Turbine's...

19/3,K/3 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

05638252 Supplier Number: 108283319 (USE FORMAT 7 FOR FULLTEXT)
EPA Seeks New Emission Standards For Aircraft Engines.
Commuter Regional Airline News, v21, n37, p0
Sept 29, 2003
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 313

... correspond to recent amendments to the ICAO test procedures for these emissions.
Beginning in 2004, the proposed NOx standards would apply to newly

certified gas **turbine engines** -- those engines **designed** and certified after the effective date of the proposed regulations (the date of manufacture of the first individual production **model** means the date of type certification).

Since the proposed NOx standards would apply to only newly certified gas turbine engines, newly manufactured engines (those engines...

19/3,K/4 (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

03054627 Supplier Number: 46239834 (USE FORMAT 7 FOR FULLTEXT)
PNGV Program Needs to Build on Successes
Clean Air Network Online Today, pN/A
March 21, 1996
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 327

... PNGV has set 1997 as a goal to select the most promising prototype for development, with hybrid- electric vehicles in the forefront of all other **models** .

Current technological and cost effective challenges include controlling emissions from direct-injection compression engines, furthering research on fuel cells and gas- **turbine engines** , **designing** and manufacturing a low-weight safe body structure, and developing energy storage technologies.

The report calls for a more united effort from both the automotive...

19/3,K/5 (Item 3 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

02555623 Supplier Number: 45156146 (USE FORMAT 7 FOR FULLTEXT)
GE UNITS AND RYBINSK MOTORS FORM JOINT VENTURE (NOV 22/0911 GMT)
Periscope Daily Defense News Capsules, pN/A
Nov 22, 1994
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 232

The agreement between GEM&IE and Rybinsk Motors defines a Russian joint venture that will **assemble** , sell, and repair industrial gas **turbine engines** that are based on GE's LM **model** aeroderivative designs. The engines will be used for natural gas transmission and power generation, Rybinsk Motors' facilities will be expanded to manufacture parts for the...

19/3,K/6 (Item 4 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

01223409 Supplier Number: 41222303 (USE FORMAT 7 FOR FULLTEXT)
WRIGHT-PATTERSON PLANS WORK ON INTELLIGENT ENGINE CONTROL:
SDI Intelligence Report, v6, n6, pN/A
March 13, 1990
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 96

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...Wright-Patterson Air Force Base, plans to issue an RFP in mid-March for assessing the potential impact of an intelligent engine control on both **turbine engine design** and installed operation by using **model** -based

control techniques. Work will investigate to what extent advanced control modes and logic can impact overall engine performance, operability and supportability. For more information...

19/3,K/7 (Item 5 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)

01182852 Supplier Number: 41070536 (USE FORMAT 7 FOR FULLTEXT)
WRIGHT-PATTERSON TO STUDY INTELLIGENT ENGINE CONTROL
SDI Intelligence Report, v5, n26, pN/A
Dec 19, 1989
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 201

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...is seeking sources for design, analysis and simulation test evaluation of an intelligent turbine engine control. The program's objective is "to make use of **model** -based control techniques to assess the potential impact of an intelligent engine control on both **turbine engine design** and installed operation" and to investigate to what extent advanced control modes and logic can affect overall engine performance, operability and supportability.

19/3,K/8 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

09013102 Supplier Number: 78436402 (USE FORMAT 7 FOR FULLTEXT)
Comanche helicopter blends CAD models from 14 suppliers.(Brief Article)
Design News, v56, n17, p31
Sept 3, 2001
Language: English Record Type: Fulltext
Article Type: Brief Article
Document Type: Magazine/Journal; Refereed; Academic Trade
Word Count: 538

... his file to TTI's central server--protected with 128-bit security--then retrieves it within 48 hours. The new file behaves like a native **model** , complete with functional history tree.
In the helicopter project, contractor Williams International had used Pro/ENGINEER (Pro/E) to **design** a small gas **turbine engine** , called a Sub-system Propulsion Unit (SPU). This complex, 250-piece assembly would usually require much time and money to translate into the CATIA system...

19/3,K/9 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

06527694 Supplier Number: 55308867 (USE FORMAT 7 FOR FULLTEXT)
Combating tank engine failures.
Demmler, Al
Automotive Engineering International, v107, n7, p71
July, 1999
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Academic Trade
Word Count: 366

Researchers at the Dept. of Energy's Pacific Northwest National Laboratory are **developing** TEDANN, or **Turbine Engine** Diagnostics Using Artificial Neural Networks, for the Army. The technology uses diagnostic engineering, artificial neural networks, and **model** -based decision

algorithms to predict failures and abnormal operations in the M1 Abrams main battle tank's turbine engine.
"This technology will extend the life...

19/3,K/10 (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

06057010 Supplier Number: 54349714 (USE FORMAT 7 FOR FULLTEXT)
Williams V-JET II will be shown at Oshkosh.
Lopez, Ramon
Flight International, p26(1)
July 16, 1998
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 278

... wing and a V-tail.
Several V-JET designs have been produced by Williams. Three full-scale mock-ups and at least a dozen small **models** were built before the present V-JET II configuration, the company says.
In 1996, NASA's Lewis Research Center picked Williams to **develop** a low- cost **turbine engine** as part of its General Aviation Propulsion (GAP) programme. The project will cost $100 million, with NASA contributing 40% and Williams the remainder.
The GAP...

19/3,K/11 (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

05321125 Supplier Number: 48099923
First production model advanced MD Explorer takes flight.
Chamberlain, Gary
Design News, p16
Nov 3, 1997
Language: English Record Type: Abstract
Document Type: Magazine/Journal; Refereed; Academic Trade

ABSTRACT:
...Program has developed the twin turbine, eight-place helicopter MD Explorer, which made its maiden flight at Boeing's Mesa, AZ, facility. The new helicopter **model** features advanced technology including increased thermodynamic ratings, improved anti-torque and directional control inlet **design** , new Pratt and Whitney 206E **turbine engines** and an improved stabilizer control system. The helicopter will be certified for Category A performance to give the aircraft greater flexibility in countries with stringent...

19/3,K/12 (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

03952408 Supplier Number: 45724523
Turbines could mean more area jobs
Philadelphia Business Journal, p1
August 11, 1995
Language: English Record Type: Abstract
Document Type: Magazine/Journal; Trade

ABSTRACT:
Westinghouse Electric's Westinghouse Marine Division (Sunnyvale, CA) plans to test and **assemble** an advanced gas **turbine engine** in Philadelphia, PA. The project, **designed** for future **models** of US Navy destroyers, could create new jobs in Philadelphia. The technology aims to substantially

boost the efficiency of conventional gas turbine engines. If successful...

19/3,K/13 (Item 6 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

03922234 Supplier Number: 45664850 (USE FORMAT 7 FOR FULLTEXT)
Allied Signal plans turbine closure
Flight International, p24
July 12, 1995
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 210

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
ALLIEDSIGNAL IS **drawing** up plans to move **production** of **turbine engines** form the former Textron Lycoming plant at Stratford, Connecticut, after a base-closure commission voted to close the US Army-owned factory.

19/3,K/14 (Item 7 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

02126170 Supplier Number: 42757778 (USE FORMAT 7 FOR FULLTEXT)
SUPER COMPUTING
InformationWeek, p8
Feb 17, 1992
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 74

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
Allison Gas Turbine, a unit of General Motors, is installing a massively parallel supercomputer to help it **design** and analyze aircraft **turbine engines** . The GM unit is taking orders for an nCube 2 **Model** 10 - its first supercomputer purchase. "Basically, we bought our own supercomputer for price/performance reasons," says Robert A. Delaney, chief of advanced turbomachinery at Allison...

19/3,K/15 (Item 8 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

01058126 Supplier Number: 41172101
HELICOPTERS & OPERATIONS/MDX progress report
Interavia Air Letter, p4
Feb 13, 1990
Language: English Record Type: Abstract
Document Type: Magazine/Journal; Trade

ABSTRACT:
...520N/530N Notar helicopter FAA certification is expected by 8/90. Notar refers to the no-tail-rotor design for torque balance and directional control. **Model** designation is dictated by use of the Allison 250-C20R-2 or 250-C30 **turbine engines** , respectively. Prototypes are **assembled** on existing MD 500 airframes. ...

19/3,K/16 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)

02403509

Colt Holdings - Colt Inds' Chandler Evans Unit
S1 SEC Registration April 14, 1989 p. N/A

... engine fuel control systems, main engine fuel pumps, guided missile flight controls and engine and aircraft components for the aerospace industry. Principal customers for these **products** include gas **turbine engine** manufacturers, aircraft and guide missile manufacturers, domestic and foreign airlines, commercial fleet operators and the military services. Current products include main engine fuel pumps as replacement pumps for some **models** of United Technologies TF-30 engines on the Grumman F-14 aircraft and F-100 engines on the McDonnell Douglas F-15 and the General...

19/3,K/17 (Item 2 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)

02338799
The NEDO Program
Japanese New Materials High-Performance Ceramics July, 1989 p. N/A
FULL TEXT AVAILABLE IN FORMAT 7 OR 9 WORD COUNT: 133

The New Energy & Industrial Technology Development Organization (NEDO) started its nine year project in 1988, to **develop** a ceramic gas **turbine engine** , for cogeneration and portable power generators.

The ceramic material in a turbo molecular pump insulates against electricity and magnetism, while the gas turbine **model** is resistant to heat. There are however, technologies which are common to both applications.

The thermal nuclear fusion reactor, using deuterium and tritium, is designed...

19/3,K/18 (Item 3 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)

01439390
Westinghouse seeking a coal turbine engine.
PHILADELPHIA INQUIRER (PA) May 16, 1986 p. SecE,1

... expand the utilization of the coal deposits in the US, according to C Seglem of Westinghouse. The company expects to develop a small-scale 500KW **model** of the combustion- **turbine engine** , and **build** a larger **model** later that will be able to produce up to 100 MW. The designs of the engine call for low levels of carbon dioxide and nitrogen...

19/3,K/19 (Item 4 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)

00518260
The stratified charge engine looks like the most attractive alternative to the conventional gas engine, except for a light Diesel engine that is already in production, according to W Agnew, General Motors Corp.
American Metal Market November 26, 1979 p. 9

... region of the air charge and the engine load is controlled by the amount of fuel injected into the constant air charge. After the stratified **model** , from 1985-2000, the gas turbine, battery-powered electric motors and alcohol-fueled engines are targeted by GM as possible alternatives to gas engines. GM has already **designed** 3 prototype gas **turbine engines** . Fuel economy of 12 mpg in the city and 24 mpg in highway tests appears to be the only problem. ...

19/3,K/20 (Item 5 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

00321249
A $1 bil program to develop a new Stirling or turbine car engine by 1985: so urges a comprehensive study of alternative automobile power plants conducted by the Jet Propulsion Lab of California Institute of Technology.
Scientific American November, 1975 p. 56-581

... steam) engine, the all-electric car, hybrid configurations (part heat engine, part electric) or any conceivable improvement in the present Otto-cycle engine. A fully **developed** gas- **turbine engine** in a fleet of cars comparable in size and performance to those built in the 1975 **model** year should provide about 22% more miles/gal than an equivalent fleet powered with a mature Otto-cycle engine. A comparable fleet powered with a ...

19/3,K/21 (Item 6 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)

00279781
McDonnell Douglas Corp's Model 260 lift-cruise fan-propulsion aircraft is one of three vertical/short-takeoff-and-landing aircraft candidates being considered by the Navy and NASA as a technology aircraft for flight demonstrations.
Aviation Week & Space Technology May 27, 1974 p. 53-56

... in the Model 260 has accelerated rapidly and could lead to a full proposal of the aircraft to the service as a complete system. The **Model** 260 lift-cruise-fan V/STOL aircraft is **designed** to employ a basic gas **turbine engine** /turbotip fan propulsion system and other high-value components, while modifying the airframe for a variety of Navy uses. The aircraft is in the 25...

19/3,K/22 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

15518259 SUPPLIER NUMBER: 94326291 (USE FORMAT 7 OR 9 FOR FULL TEXT)
What's Russian for CALS? The principles of Continuous Acquisition and Lifecycle Support have firmly taken root within the Russian aviation industry. (Finance, Markets & Industry). (Industry Overview)
Bratukhin, Anatoly G.
Interavia Business & Technology, 57, 667, 19(2)
Oct, 2002
DOCUMENT TYPE: Industry Overview ISSN: 1423-3215 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1824 LINE COUNT: 00168

... main information channel in the course of data transfer via the PLC stages, using CAD/SAM/CAE-systems etc.
* Complete electronic product definition--an electronic **product model** (aircraft, gas- **turbine engines** , other technically complicated **products**). The transition from paper-based technologies to direct electronic data exchange means the transition to a new, more effective way of doing business, improvement of...

19/3,K/23 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

07592755 SUPPLIER NUMBER: 16499316 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Coordinate measurements accelerate reverse engineering. (includes related

article)
Raab, Simon
Machine Design, v66, n22, p50(4)
Nov 21, 1994
ISSN: 0024-9114 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1764 LINE COUNT: 00136

... using pencil and paper. CMMs save even more time copying complex parts with various surface curvatures requiring more detailed and higher-resolution digitizing. For instance, **creating drawings** for a **turbine engine** air intake for a C-130 aircraft took only 32 hours with a CMM, compared to 228 hours with conventional tools. The CMMed **drawings** also had higher accuracy.

CMMs are typically classified into several accuracy or precision ranges. Large or medium-size, high-precision CMMs used for machine parts...

19/3,K/24 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

06111509 SUPPLIER NUMBER: 12525295 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Active magnetic bearings give systems a lift.
O'Connor, Leo
Mechanical Engineering-CIME, v114, n7, p52(6)
July, 1992
ISSN: 0025-6501 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 4134 LINE COUNT: 00334

... compact, requiring only five power amplifiers, Meeks said. It fits within an enclosure measuring 7 inches by 16 inches by 14 inches in the prototype **model** .

Air-bearings in Space

Avcon's first active magnetic bearings were **designed** for use in advanced gas **turbine engines** and cryogenic pumps. For two years, NASA Lewis Research Center (Cleveland) has been testing the homopolar magnetic bearings at speeds of up to 15,000...

19/3,K/25 (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

04488437 SUPPLIER NUMBER: 08060982 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Caterpillar reports results.
PR Newswire, 0118NY114
Jan 18, 1990
LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 1272 LINE COUNT: 00107

... areas, with demand especially strong in Europe, Brazil, Australia and the Far East.

Diesel engine sales increased significantly primarily for electric power generation. Demand for **turbine engines** used in oil and gas **production** also rose sharply.

Dealer Inventories

U.S. dealers reduced inventories during 1989. At year-end, inventory levels were about normal relative to historical standards and current selling rates. Some **models** of large machines, however, continued in short supply.

Outside the United States, dealer

19/3,K/26 (Item 5 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

03140530 SUPPLIER NUMBER: 04748829 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Garrett adapts mfg. methods for repair business. (Garrett General Aviation Services Co.)
Jones, Sam L.
Metalworking News, v14, p20(2)
March 23, 1987
ISSN: 0891-4036 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 1518 LINE COUNT: 00121

... repairs on some 16,000 turboprop and turbofan engines manufactured by another subsidiary of Allied-Signal Inc., Garrett Turbine Engine Co., also in Phoenix. Engineering **drawings** from the original engine **designers** at Garrett **Turbine Engine** are used by Schnell's **developers** in designing repair concepts.

In Schnell's group there are repair development engineers who develop concepts of how a repair needs to be made. Then...

19/3,K/27 (Item 6 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

02971579 SUPPLIER NUMBER: 04392159 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Propfan engines output awaits resolution of design performance question.
Salak, John; Jones, Sam L.
American Metal Market, v94, pB(3)
Sept 15, 1986
ISSN: 0002-9998 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 2423 LINE COUNT: 00193

... on the left wing of a Gulfstream II test aircraft, to be flown by late next March.

Involved with Lockheed-Georgia are the GM Allison **turbine engine** division in Indianapolis, which has **developed** the 501-M78 engine from its standard **Model** 570 power section with a gearbox system developed from Allison's standard T56 engine. Turbofan blade specialist Hamilton Standard in Windsor Locks, Conn., a United...

19/3,K/28 (Item 7 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

01884483 SUPPLIER NUMBER: 03021370 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Basic combustion lab to uncover jet fuel's secrets.
Machine Design, v55, p8(1)
Nov 24, 1983
ISSN: 0024-9114 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 426 LINE COUNT: 00035

... each dollar spent. We have to make use of faster, less expensive design methodologies as we develop the technology for the next generation of gas- **turbine engines** . That means **developing** better computational capability, and anything that will improve our computer **models** is a step in that direction."

The laboratory has been equipped to conduct experiments on a much smaller scale than possible with previous facilities, permitting...

19/3,K/29 (Item 1 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications
(c) 2004 McGraw-Hill Co. Inc. All rts. reserv.

01229960
PT6: The Little Engine That Could, and Did: How a farsighted management and a dozen young engineers helped ``turbinize'' general aviation
Business & Commercial Aviation March, 2002; Pg 92; Vol. 90, No. 3
Journal Code: BCA ISSN: 0191-4642
Section Heading: Reflections

Word Count: 2,522 *Full text available in Formats 5, 7 and 9*

BYLINE:
Robert A. Searles

TEXT:
... the P&WC design, did not become the production powerplant on the Tutor. However, the engine, which became better known as the JT12, powered early **models** of the Lockheed JetStar and North American Sabreliner, the first true business jets.

Upon returning from Hartford in March 1958, the Dirty Dozen conducted a series of **design** studies on possible **turbine engines** ranging from 450 to more than 2,000 hp. Discussions with Beech, Cessna and Piper indicated that the most promising prospects were for a turboprop...

19/3,K/30 (Item 2 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications

0678366
ALLISON ENGINE COMPANY
The Weekly of Business Aviation July 17, 1995; Pg 29; Vol. 61, No. 3
Journal Code: BA ISSN: 0509-9528
Section Heading: BUSINESS AVIATION BRIEFS
Word Count: 136 *Full text available in Formats 5, 7 and 9*

TEXT:
... this spring by Rolls-Royce, Inc. for $525 million (BA, March 27/130), said the first cooperative effort between Taiwan and Allison may involve the **Model** 572-K industrial and marine **turbine engine** . That program, to **develop** a new 9,000- to 12,000-shaft-horsepower engine, "is structured to include risk and revenue sharing partners who provide the initial investment to...

19/3,K/31 (Item 3 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications

0623453
GE FORMS JOINT VENTURE WITH RUSSIAN COMPANY
The Weekly of Business Aviation December 19, 1994; Pg 267; Vol. 59, No. 25
Journal Code: BA ISSN: 0509-9528
Word Count: 160 *Full text available in Formats 5, 7 and 9*

TEXT:
... form a joint venture for industrial gas turbines and for further discussions on joint aircraft engine programs. The agreement defines a joint venture that will **assemble** , sell and repair industrial gas **turbine engines** that are based on GE's LM **model** aeroderivative designs, GE said last week. The engines will be used for natural gas transmission and power generation. Rybinsk Motors' facilities will be expanded to...

19/3,K/32 (Item 4 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications

0621179
GE Units Sign Cooperation Deal With Russian Company
Aviation Daily November 22, 1994; Pg 292; Vol. 318, No. 35
Journal Code: AD ISSN: 0193-4597
Word Count: 146 *Full text available in Formats 5, 7 and 9*

TEXT:
... Russia, to form a joint venture to produce industrial gas turbines and discuss joint aircraft engine programs. The agreement defines a joint

venture that will **assemble** , sell and repair industrial gas **turbine engines** , based on GE's LM **model** aeroderivative designs, for use in natural gas transmission and power generation. Rybinsk Motors' facilities will be expanded to manufacture parts for the venture and assemble...

19/3,K/33 (Item 5 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications

0621102
General Electric signs pact with Russian company
Aerospace Daily November 22, 1994; Pg 272; Vol. 172, No. 35
Journal Code: ASD ISSN: 0193-4546
Word Count: 157 *Full text available in Formats 5, 7 and 9*

TEXT:
... form a joint venture for industrial gas turbines and for additional discussions on joint aircraft engine programs.

The agreement defines a joint venture that will **assemble** , sell and repair industrial gas **turbine engines** that are based on GE's LM **model** aeroderivative designs, GE said yesterday. The engines will be used for natural gas transmission and power generation.

Rybinsk Motors' facilities will be expanded to manufacture...

19/3,K/34 (Item 6 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications

0276537
ALLISON GAS TURBINES
The Weekly of Business Aviation February 11, 1991; Pg 61; Vol. 52, No. 6
Journal Code: BA ISSN: 0509-9528
Section Heading: Business Aviation Briefs
Word Count: 71 *Full text available in Formats 5, 7 and 9*

TEXT:
ALLISON GAS TURBINES will increase the power of its **Model** 250-C20R and -C30 series **turbine engines** in new versions **producing** 525 shp and 850 shp, respectively. The engines currently are rated at 450 shp and 650 shp. Allison expects to begin deliveries of the new...

19/3,K/35 (Item 7 from file: 624)
DIALOG(R)File 624:McGraw-Hill Publications

0015710
Washington Roundup
Aviation Week & Space Technology June 23, 1986; Pg 15; Vol. 124, No. 25
Journal Code: AW ISSN: 0005-2175
Section Heading: Washington Roundup
Word Count: 737 *Full text available in Formats 5, 7 and 9*

BYLINE:
WASHINGTON STAFF

TEXT:
... of the Air Force/Lockheed Corp. stealth fighter are expected to start reaching hobby shops in the U. S. beginning this week. The Rockford, Ill., **model** builder says that the -scale aircraft was **designed** by taking General Electric J85 **turbine engines** and removing the afterburners and then balancing the engine size to a conceptual airframe. All of the factors that drive stealth technology, such as a...

19/3,K/36 (Item 1 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

02240484 84988626
Finite element methods and material processing technology, an addendum (1994-1996)
Mackerle, Jaroslav
Engineering Computations v15n5 PP: 616-690 1998
ISSN: 0264-4401 JRNL CODE: NGCP
WORD COUNT: 40212

...TEXT: steel; austenitic stainless steel; microalloy steel; porous alloy steel; superalloys; aluminum alloy; titanium alloy; titanium aluminide alloy; Waspalloy; Al-Si-Mg alloy; die steels. Constitutive **models** - elasto-plastic; elasto-plastic microvoided material; viscoplastic; elasto-viscoplastic; elasto-viscoplastic paste material; thermo-viscoplasti c; introduction of anisotropy.

Products. Billets; ingots; tubes; large diameter tubes; large axisymmetric **products** ; crankshafts; **turbine engine** discs and blades; connecting rods; rotor shafts; automotive components; thin-walled structures; bevel and helical gears; exhaust valves.

Extrusion
Extrusion is a process of letting...

19/3,K/37 (Item 2 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01767304 04-18295
New ideas make complex solids simple
Dvorak, Paul
Machine Design v71n3 PP: 62-72 Feb 11, 1999
ISSN: 0024-9114 JRNL CODE: MDS
WORD COUNT: 2522

...TEXT: feat. It allows precise positioning of components and details, rendering modules to improve communications by making final designs look like photographs, and 2D tools to **produce** detail **drawings** and sections.

The **turbine engine** in the picture helps illustrate new features now becoming available in solid-modeling software. As remarkable as it may sound, they let just one person **model** the 1,165 parts in the prototype automobile engine, and in only 20 days. Of course the idea for the engine has been incubating for...

19/3,K/38 (Item 3 from file: 15)
DIALOG(R)File 15:ABI/Inform(R)

01704077 03-55067
March of the micros
Burr, Michaeal T
Independent Energy v28n4 PP: 18-20 May 1998
ISSN: 1043-7320 JRNL CODE: IEN
WORD COUNT: 1504

...TEXT: electricity rates are the highest on the grid.

AlliedSignal formed a new subsidiary, AlliedSignal Power Systems, Inc., to develop and market its 75 kW TurboGenerator **model** . Production is expected to begin in late 1998. The machine is **designed** using AlliedSignal's aerospace **turbine engine** technologies and manufactured using expertise

from the company's automotive turbocharger business. A key design feature is the TurboGenerator's single moving part-a shaft...

19/3,K/39 (Item 1 from file: 369)
DIALOG(R)File 369:New Scientist

00108076 14920184.700 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Blades at the cutting edge: There is a special hell for people who design turbines and pumps. It's called fluid flow. But one man is planning a revolution
MULLINS, JUSTIN
New Scientist, vol. 149, no. 2018, p. Page 25
February 24, 1996
LANGUAGE: English RECORD TYPE: Fulltext DOC. TYPE: Journal
WORD COUNT: 1992

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...also vastly more efficient. Zangeneh says that preliminary studies show that his radial pumps may be up to 10 per cent more efficient than traditional **models** . "A couple of per cent would be an incredible breakthrough with other methods," he adds. With the increased efficiency, it may even be possible to **build** smaller gas **turbine engines** that **produce** the same power.

Zangeneh believes his ideas will revolutionise manufacturing techniques. Because inverse design relies less heavily on iterations, it drastically reduces the development time...

19/3,K/40 (Item 1 from file: 810)
DIALOG(R)File 810:Business Wire

0015903 BW025

GARRETT CORP: Signs manufacturing agreement with Rolls-Royce for RAF basic trainer engine

July 1, 1986

Byline: Business Editors

...Phoenix, Ariz. "Our engine certification and delivery schedules remain on time and we are anticipating no delays in the engine program," said Craig.

The Garrett **Turbine Engine** Co. has **produced** over 10,000 TPE331 engines which have been installed in 70 different **models** of aircraft. TPE331 engines have over 32 million hours of service.

```
File 348:EUROPEAN PATENTS 1978-2004/Jul W02
         (c) 2004 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20040722,UT=20040715
         (c) 2004 WIPO/Univentio

Set     Items   Description
S1       5685   TURBINE()ENGINE? ?
S2    1121601   TEMPLATE? ? OR MODEL? ? OR BLUEPRINT? ? OR DIAGRAM? ? OR D-
             RAWING? ?
S3     181018   DATABASE? ? OR DATA()(BASE? ? OR WAREHOUSE? ?) OR REPOSITO-
             R??? OR (KNOWLEDGE OR INFORMATION)()MANAGEMENT OR ARCHIVE? ? -
             OR LIBRARY OR LIBRARIES
S4       1323   S1(5N)(DESIGN??? OR CREAT??? OR DEVELOP??? OR BUILD??? OR -
             CONSTRUCT??? OR PRODUC???? OR ASSEMBL???)
S5          0   S1(10N)TEMPLATE? ?
S6        609   S1(10N)S2
S7         46   S6(50N)S3:S4
S8          4   S7 AND IC=G06F
S9          0   S1(10N)S2(10N)S3
S10        11   S6 AND IC=G06F
S11         7   S10 NOT S8
S12         3   S1(10N)S3
S13         3   S12 NOT (S8 OR S11)
S14        12   S4 AND IC=G06F
S15         7   S14 NOT (S8 OR S11 OR S13)
```

8/3,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01649288
Method and system for developing **a hybrid gas** turbine engine **state variable** model
Verfahren und Vorrichtung zur Entwicklung eines hybriden Gasturbinenmodells auf der Basis von Zustandsvariablen
Procede et systeme pour la mise au point d'une turbine a gaz hybride avec des caracteristiques variables
PATENT ASSIGNEE:
UNITED TECHNOLOGIES CORPORATION, (206570), United Technologies Building, 1 Financial Plaza, Hartford, CT 06101, (US), (Applicant designated States: all)
INVENTOR:
Volponi, Allan J., 175 West Mountain Road, West Simsbury, CT 06092, (US)
LEGAL REPRESENTATIVE:
Leckey, David Herbert (73221), Frank B. Dehn & Co., European Patent Attorneys, 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 1357487 A2 031029 (Basic)
APPLICATION (CC, No, Date): EP 2003252453 030417;
PRIORITY (CC, No, Date): US 132108 020423
DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK
INTERNATIONAL PATENT CLASS: **G06F-017/50**
ABSTRACT WORD COUNT: 153
NOTE:
Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200344	692
SPEC A	(English)	200344	2219
Total word count - document A			2911
Total word count - document B			0
Total word count - documents A + B			2911

Method and system for developing **a hybrid gas** turbine engine **state variable** model
INTERNATIONAL PATENT CLASS: **G06F-017/50**

8/3,K/2 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00761424
A SYSTEM, METHOD, AND ARTICLE OF MANUFACTURE FOR PHASE DELIVERY OF COMPONENTS OF A SYSTEM REQUIRED FOR IMPLEMENTATION OF TECHNOLOGY
SYSTEME, PROCEDE ET ARTICLE MANUFACTURE DESTINES A LA FOURNITURE PAR PHASES DE COMPOSANTS D'UN SYSTEME NECESSAIRES A L'APPLICATION D'UNE TECHNIQUE
Patent Applicant/Assignee:
ACCENTURE LLP, 100 South Wacker Drive, Chicago, IL 60606, US, US (Residence), US (Nationality)
Inventor(s):
GUHEEN Michael F, 2218 Mar East Street, Tiburon, CA 94920, US,
MITCHELL James D, 3004 Alma, Manhattan Beach, CA 90266, US,
BARRESE James J, 757 Pine Avenue, San Jose, CA 95125, US,
Legal Representative:
BRUESS Steven C (agent), Merchant & Gould P.C., P.O. Box 2903, Minneapolis, MN 55402-0903, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200073930 A2 20001207 (WO 0073930)
Application: WO 2000US14458 20000524 (PCT/WO US0014458)
Priority Application: US 99321360 19990527

Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AT (utility model) AU AZ BA BB BG BR BY CA CH CN CR CU CZ CZ (utility model) DE DE (utility model) DK DK (utility model) DM DZ EE EE (utility model) ES FI FI (utility model) GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KR (utility model) KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SK (utility model) SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 149456

Main International Patent Class: **G06F-017/60**
Fulltext Availability:
Detailed Description

Detailed Description
... IDMS)
Relational (e.g., 13132)
0 Inverted List (e.g., ADABAS)
Although entity-relationship diagrams are independent of specific DBMSs or access methods, a logical **database** design is not. This design is highly dependent on the platform components and may need to be repeated for each location type and platform type.

This process is simplified if a data **model** is used.

h) Does the system interface with external systems having their own data definitions?
Data modeling tools allow documentation of the data in so far as it appears in the data model (and ultimately in the **database**). However, there is usually a significant number of other data definitions which will never appear in the database, and whose definition is different to the...

8/3,K/3 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2004 WIPO/Univentio. All rts. reserv.

00757123 **Image available**
METHOD FOR DESIGNING A CYCLIC SYMMETRIC STRUCTURE
PROCEDE DE CONCEPTION DE STRUCTURE A SYMETRIE CYCLIQUE
Patent Applicant/Assignee:
ALLISON ENGINE COMPANY INC, P.O. Box 420, Indianapolis, IN 46206, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
BURNS Donald W, 748 West Mill Street, Danville, IN 46122, US, US (Residence), US (Nationality), (Designated only for: US)
LOUIE John R, 1197 Gasburg Road, Mooresville, IN 46158, US, US (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
ALLIE John H (et al) (agent), Woodard, Emhardt, Naughton, Moriarty & McNett, Suite 3700, Bank One Center/Tower, 111 Monument Circle, Indianapolis, IN 46204, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200070509 A1 20001123 (WO 0070509)
Application: WO 2000US12994 20000512 (PCT/WO US0012994)
Priority Application: US 99133956 19990513
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES

FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 12621

Main International Patent Class: **G06F-017/50**
Fulltext Availability:
Detailed Description
Claims

Detailed Description
... no longer couple, or only weakly couple, into the first natural frequency.
Briefly describing another aspect of the present invention, there is a method for **designing** a gas **turbine** **engine** that includes preparing a finite element **model** of a wheel assembly which includes a model of a coupling. A coupling stress is predicted for the vibratory response of the model with the...

Claim
... computing; and
which further comprises imposing a predetermined vibratory displacement upon a portion of the cyclically symmetric structure during said recomputing.

23 A method for **designing** a gas **turbine** **engine** component, comprising:
preparing a finite element **model** of a wheel assembly coupled to another rotating member within a gas **turbine** **engine** , the **model** including a wheel with a plurality of blades and a coupling for coupling the wheel to the other rotating member;
constraining the model at the...

8/3,K/4 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00107155 **Image available**
REAL-TIME PERFORMANCE MONITORING OF GAS TURBINE ENGINES
CONTROLE DES PERFORMANCES EN TEMPS REEL DE MOTEURS A TURBINE A GAZ
Patent Applicant/Assignee:
BOEING CO,
Inventor(s):
BERNIER J,
KAMBER P,
Patent and Priority Information (Country, Number, Date):
Patent: WO 8103079 A1 19811029
Application: WO 80US447 19800422 (PCT/WO US8000447)
Priority Application: WO 80US447 19800422
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
GB DE FR GB NL SE
Publication Language: English
Fulltext Word Count: 28837

Main International Patent Class: **G06F-015/20**
Fulltext Availability:
Detailed Description

Detailed Description

... such
as read-only memory units(i,e,,, "firm-ware"), and various
3 7RZA@(Uj
n jr@@ @
OMPI
WIPO
combinations thereof.

Brief Description of the **Drawings**
FIG. 1 is a, block **diagram** of a gas **turbine engine** performance monitoring system **constructed** in accordance with this invention;
FIG, 2 is a block diagram that is useful in understanding the electronic simulation or modeling used in the practice...

File 347:JAPIO Nov 1976-2004/Mar(Updated 040708)
(c) 2004 JPO & JAPIO
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200447
(c) 2004 Thomson Derwent

Set	Items	Description
S1	12454	TURBINE()ENGINE? ?
S2	3051754	TEMPLATE? ? OR MODEL? ? OR BLUEPRINT? ? OR DIAGRAM? ? OR DRAWING? ?
S3	176001	DATABASE? ? OR DATA()(BASE? ? OR WAREHOUSE? ?) OR REPOSITOR??? OR (KNOWLEDGE OR INFORMATION)()MANAGEMENT OR ARCHIVE? ? OR LIBRARY OR LIBRARIES
S4	1001	S1(5N)(DESIGN??? OR CREAT??? OR DEVELOP??? OR BUILD??? OR CONSTRUCT??? OR PRODUC???? OR ASSEMBL???)
S5	2	S1(10N)TEMPLATE? ?
S6	114	S1 AND IC=G06F
S7	179	S1(10N)S2
S8	23	(S3 OR S4) AND S7
S9	21	S8 NOT S5
S10	70	S6 AND (S2:S4)
S11	65	S10 NOT (S5 OR S9)
S12	54	S11 AND AC=US/PR
S13	40	S12 AND AY=(1970:2001)/PR
S14	15	S11 AND PY=1970:2001
S15	44	S13:S14

15/TI/1 (Item 1 from file: 350)
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Gas turbine engine **maintenance task list definition method, involves adding desired task selected from list, to maintenance task list, and adding related task to maintenance task list**

15/TI/2 (Item 2 from file: 350)
DIALOG(R)File 350:(c) 2004 Thomson Derwent. All rts. reserv.

Decision making process, involves determining whether each performance shift is actionable and required maintenance action is determined for actionable performance shifts by identifying potential causes

15/TI/3 (Item 3 from file: 350)
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Spline coupling designing **method for gas** turbine engines , **involves** creating **geometric representation of spline coupling associated factor if desired data signal has predetermined relationship with the** database **signal**

15/TI/4 (Item 4 from file: 350)
DIALOG(R)File 350:(c) 2004 Thomson Derwent. All rts. reserv.

Trigger point set up method for gas turbine engine , **involves selection of alarm limit based on predictions indicating that selected alarm limit will attain specified degree of accuracy**

15/TI/5 (Item 5 from file: 350)
DIALOG(R)File 350:(c) 2004 Thomson Derwent. All rts. reserv.

Engine surge discrimination method for aircraft gas turbine engines , **involves identifying temporal regions based on occurrence and non occurrence of surge event and incrementing or decrementing counter based on event**

15/TI/6 (Item 6 from file: 350)
DIALOG(R)File 350:(c) 2004 Thomson Derwent. All rts. reserv.

Self-verifying temperature measurement and control instrument comprises first and second temperature sensors each generating signal indicative of temperature of medium, and circuitry to detect proper operation of first sensor

15/TI/7 (Item 7 from file: 350)
DIALOG(R)File 350:(c) 2004 Thomson Derwent. All rts. reserv.

Detecting in-range engine sensor faults for helicopter gas turbine engines , **by comparing horsepower deviation ratios for several sensors to predefined limits to detect faulty sensors**

15/TI/8 (Item 8 from file: 350)
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Lifetime tracking process for gas turbine engines , **involves noting when service outage affects one or more parts of** database **and updating status of each part at end of service outage in** database

15/TI/9 (Item 9 from file: 350)

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Machine components inspecting/recording method for gas turbine, involves selecting predefined area of component and checking whether predefined conditions are satisfied, and recording measured readings

15/TI/10 (Item 10 from file: 350)
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Fuel control system for use with gas turbine engines **, using computed signals from embedded, real-time thermodynamic engine** model **when attempting to match actual core engine acceleration or deceleration rates to demanded rate**

15/TI/11 (Item 11 from file: 350)
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Fault detection system e.g. for gas turbine engine **, uses fault detection and isolation algorithm to calculate innovation sequences for estimated states at component inlet and outlet, and to compare with predetermined thresholds**

15/TI/12 (Item 12 from file: 350)
DIALOG(R)File 350:(c) 2004 Thomson Derwent. All rts. reserv.

Diagnostic system for turbine engine **to evaluate faults by evaluating performance parameter of engine under performance conditions to generate current engine data**

15/TI/13 (Item 13 from file: 350)
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Database **analysis information storage and recovery method for management of complicated machines, involves storing files created using sorted datasets, as separate records**

15/TI/14 (Item 14 from file: 350)
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Pressure oscillation suppression method in gas turbine engine **, involves providing control signal as function of in-phase, quadrature, phase signals, to control undesirable combustor pressure variations**

15/TI/15 (Item 15 from file: 350)
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Maintenance operations managing apparatus to assist in routing of parts in repair or overhaul of gas turbine engines **using tailored work instructions**

15/TI/16 (Item 16 from file: 350)
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Engine starting system performance monitoring method for gas turbine engine **, involves capturing selected engine starting system performance data when data relating to engine operation and performance meets specific criteria**

15/TI/17 (Item 17 from file: 350)
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Gas turbine engine performance monitoring method involves normalizing engine performing using oil, turbine and exhaust gas temperature, and core speed data evaluated when specific criteria are met

15/TI/18 (Item 18 from file: 350)

Surge bleed valve faults detection method involves monitoring engine operating parameter in gas turbine engine , based on which valve operation check signal is set to fault or correct state

15/TI/19 (Item 19 from file: 350)

Shaft speed signal frequency change rate testing system for detecting in-range failures of gas turbine engine estimates standard deviation of shaft speed signal using specific equation

15/TI/20 (Item 20 from file: 350)

Component operation status evaluation system e.g. for turbine nozzle, outputs component operation report, based on condition and disposition of component, along with recommended set of repair processes

15/TI/21 (Item 21 from file: 350)

Aerodynamic designing confirmation for gas turbine engine components, involves comparing analysis algorithm with design limits to generate design output and to output alert signal, when design output exceeds limit

15/TI/22 (Item 22 from file: 350)

Gas turbine operation method for use in aircraft, involves using pulse train to compute speed and vibration of rotor

15/TI/23 (Item 23 from file: 350)

Digital drawings generating method e.g. for gas turbine engine , involves generating multiple digital drawing views based on orthographic projection rules and computer generated model acquired from server

15/TI/24 (Item 24 from file: 350)

Aviation nonconformance component management system to capture nonconformance data elements at inspection process of aircraft engine components includes data/image capture screens and workstations

15/TI/25 (Item 25 from file: 350)

Fault detecting method for air craft engines, involves calculating expected system dependent variables based on independent variables that

are provided by selecting subset of most reliable variables

15/TI/26 (Item 26 from file: 350)
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Trend identification method for aircraft engine operation, involves generating normalized engine trend parameters in real-time, using engine sensor data and ambient flight condition data

15/TI/27 (Item 27 from file: 350)
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Mechanical components design analysis e.g. for turbine engine disc, involves executing engineering analysis program to generate performance estimate from engineering analysis model formed by translating context model

15/TI/28 (Item 28 from file: 350)
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Object maintaining method e.g. for aircraft, involves comparing images of object to determine whether maintenance operation is to be performed on object

15/TI/29 (Item 29 from file: 350)
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Sensor fault detection method for gas turbine engine , involves generating modeled sensor values and determining difference between actual and modeled sensor values

15/TI/30 (Item 30 from file: 350)
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Workpiece machining method in multiaxis numerically controlled machine e.g. for compressor rotor blade manufacture, involves shifting workpiece based on its offset from nominal configuration

15/TI/31 (Item 31 from file: 350)
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Information accessing system for providing aircraft engine inspection/repair services, updates centralized database with inspection information received from internal user

15/TI/32 (Item 32 from file: 350)
DIALOG(R)File 350:(c) 2004 Thomson Derwent. All rts. reserv.

Aviation parts and services system (APS) for providing service to aircraft turbine engine , retrieves updated aviation parts and service information from database in response to inquiry received from customer

15/TI/33 (Item 33 from file: 350)
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Determining clearance between rotor blades of a rotor assembly and a shroud radially outside the rotor assembly in a gas turbine engine

15/TI/34 (Item 34 from file: 350)

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Generating fuel flow request signal for engine has level of authority to each of fuel flow control signals based on fuzzy logic including number of rules and membership functions

15/TI/35 (Item 35 from file: 350)
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System for controlling gas turbine engine **comprises planning memory, processor with memory receiving reference input and generating control signal as function of reference input and memorized plan**

15/TI/36 (Item 36 from file: 350)
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Fan speed control system for gas turbine engine **in aircraft, comprises processor to generate modified speed signal based on actual speed and selected valve of speed characteristics stored in memory**

15/TI/37 (Item 37 from file: 350)
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Model **of system e.g. gas** turbine engine **having input from one or more sensors - relates vector of performance parameter changes to sensor output change vector, vectors being of different dimensions, and determines common component of performance parameter changes using non-square coefficient matrix**

15/TI/38 (Item 38 from file: 350)
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Control device of control system od gas turbine engine **- has memory unit to form numbers of time** diagram **stage corresponding to start of new programme section, fixed in counter**

15/TI/39 (Item 39 from file: 350)
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Pre-emptive maintenance system for performing maintenance and process assurance on run-critical equipment - has monitor control processor artificial intelligence algorithm for processing sensor signals initially according to learning procedure and later according to monitoring procedure to evaluate energy contents in discrete parts of signals

15/TI/40 (Item 40 from file: 350)
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Design system for designing **bracket of gas** turbine engine **of aircraft or marine application - has bracket intelligence builder module configured to prompt user to select feature if** model **does not have intelligence data and to automatically attach intelligence data to** model

15/TI/41 (Item 41 from file: 350)
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Identification of matrix of transmission coeffts. of gas- turbine engine **- in which first time derivatives are determined of rotation frequencies of all rotors and ratios of variations of input and output coordinates of engine are determined**

15/TI/42 (Item 42 from file: 350)

Parameter indication circuit for gas turbine engine **- uses mathematical** model **and corrects critical parameter with measurement when device operates under steady-state conditions**

15/TI/43 (Item 43 from file: 350)

Acoustic spectrum monitoring method - deriving multi-dimension condition vector from detected sound and speed, temperature and control settings

15/TI/44 (Item 44 from file: 350)

Gas turbine engine **controller fault diagnosis system - has** model **which simulates signal response or actuator loop error between commanded and actual actuator position**